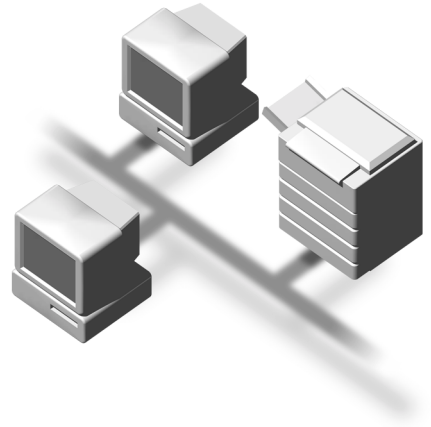




Network Printing Guide



For safety, please read this manual carefully before you use this product and keep it handy for future reference.

Introduction

To get maximum versatility from this machine all operators should carefully read and follow the instructions in this manual. Please keep this manual in a handy place near the machine.

Please read the Safety Information in the Operating Instructions before using this machine. It contains important information related to USER SAFETY and PREVENTING EQUIPMENT PROBLEMS.

Important

Contents of this manual are subject to change without prior notice. In no event will the company be liable for direct, indirect, special, incidental, or consequential damages as a result of handling or operating the machine.

Software Version Conventions Used in this Manual

- NetWare 3.x means NetWare 3.12 and 3.2.
- NetWare 4.x means NetWare 4.1, 4.11 and IntranetWare.

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SunOS is a trademark of Sun Microsystems, Inc.

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Note

The proper names of the Windows operating systems are as follows:

- The product name of Windows[®] 95 is Microsoft[®] Windows 95.
- The product name of Windows[®] 98 is Microsoft[®] Windows 98.
- The product name of Windows[®] Me is Microsoft[®] Windows Millennium Edition (Windows Me).
- The product names of Windows[®] XP are as follows:
Microsoft[®] Windows[®] XP Professional
Microsoft[®] Windows[®] XP Home Edition
- The product names of Windows[®] 2000 are as follows:
Microsoft[®] Windows[®] 2000 Advanced Server
Microsoft[®] Windows[®] 2000 Server
Microsoft[®] Windows[®] 2000 Professional
- The product names of Windows NT[®] 4.0 are as follows:
Microsoft[®] Windows NT[®] Server 4.0
- Microsoft[®] Windows NT[®] Workstation 4.0

Manuals for This Machine

The following manuals describe the operational procedures and maintenance of this machine.

To enhance safe and efficient operation of this machine, all users should read and follow the instructions carefully.

❖ **Printer Reference 1**

Describes the system settings, procedures and functions for using this machine. This manual is also included as a PDF file on the CD-ROM labeled "Printer Drivers and Utilities".

❖ **Printer Reference 2**

Describes the procedures and provides necessary information about using this machine. This manual is included as a PDF file on the CD-ROM labeled "Printer Drivers and Utilities".

❖ **Network Printing Guide**

Describes the procedures and provides necessary information about setting up and using the machine under the network environment. We recommend this manual as your first choice to read, and it is included as a PDF file on the CD-ROM labeled "Printer Drivers and Utilities" (this manual).

How to Read This Manual

Symbols

In this manual, the following symbols are used:

 **WARNING:**

This symbol indicates a potentially hazardous situation which, if instructions are not followed, could result in death or serious injury.

 **CAUTION:**

This symbol indicates a potentially hazardous situation which, if instructions are not followed, may result in minor or moderate injury or damage to property.

* The statements above are notes for your safety.

 **Important**

If this instruction is not followed, paper might be misfed, originals might be damaged, or data might be lost. Be sure to read this.

 **Preparation**

This symbol indicates the prior knowledge or preparations required before operating.

 **Note**

This symbol indicates precautions for operation, or actions to take after misoperation.

 **Limitation**

This symbol indicates numerical limits, functions that cannot be used together, or conditions in which a particular function cannot be used.

 **Reference**

This symbol indicates a reference.

[]

Keys that appear on the machine's display panel.

Keys and buttons that appear on the computer's display.

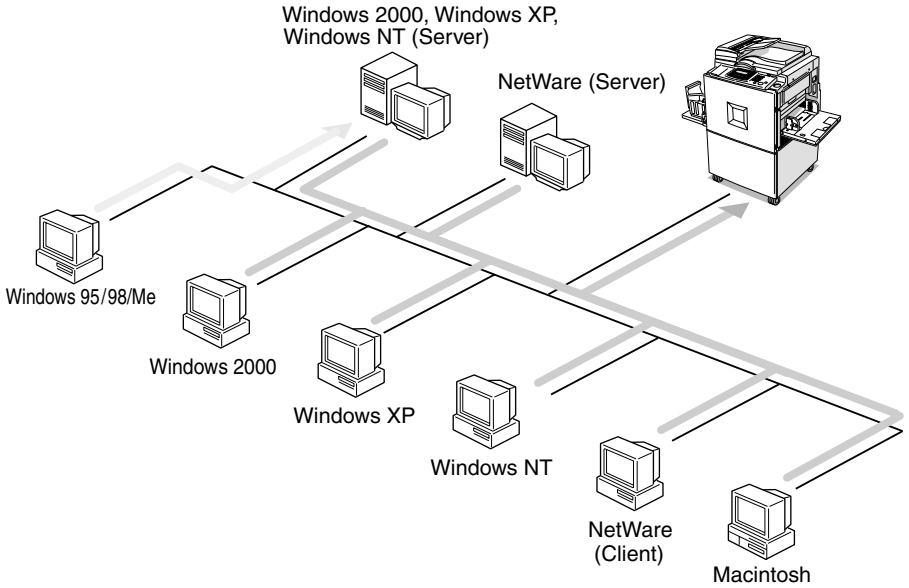
[]

Keys built into the machine's control panel.

Keys on the computer's keyboard.

Introduction

This manual contains detailed instructions on configuring the machine as a network printer. Read the section appropriate to your network environment on how to configure the machine correctly.



Important

The procedures written in this manual assume that you are a network administrator. If you are not, be sure to consult your network administrator before configuration.

◆ Features

- Support for 100BASE-TX and 10BASE-T
- The Network Interface Board is compatible with Windows 95/98/Me (TCP/IP, NetBEUI, IPP ^{*1}), Windows 2000 (TCP/IP, NetBEUI, IPP ^{*1}), Windows XP (TCP/IP, IPP ^{*1}), Windows NT 4.0 (TCP/IP, NetBEUI, IPP ^{*1}), NetWare (IPX/SPX, TCP/IP) and Macintosh (AppleTalk) protocols. This allows you to use the machine in a network that uses different protocols and operating systems.
- A computer used as a dedicated print server is not required because the Network Interface Board can be configured as a NetWare print server.
- The Network Interface Board can connect the machine to the network without requiring its own power supply because the Network Interface Board is installed inside the machine.

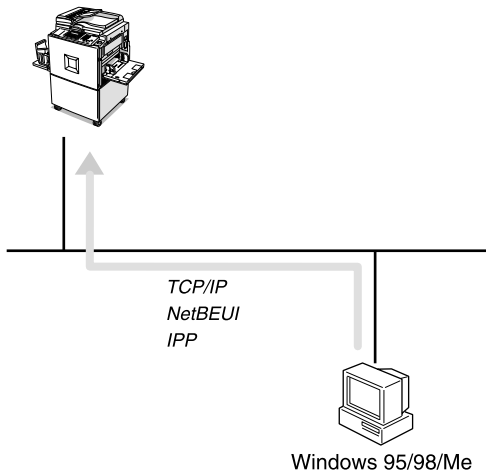
^{*1} IPP (Internet Printing Protocol) is a protocol for printing via the Internet.

Setting Up the Machine on a Network

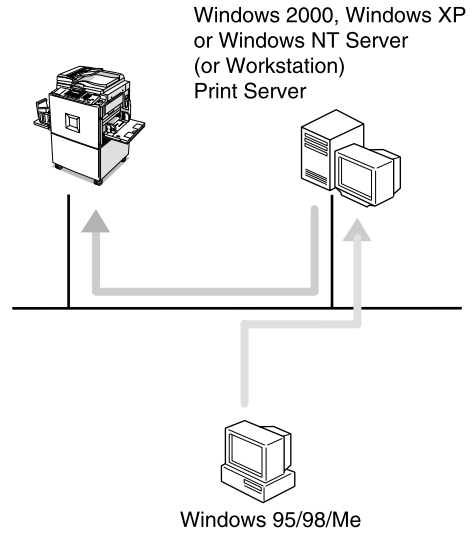
Windows 95/98/Me

For setting up the machine as a network printer in a Windows 95/98/Me environment, see p.1 “Windows 95/98/Me Configuration”. There are two methods for using the machine as a network printer.

❖Printing without a Print Server



❖Printing with a Windows 2000, Windows XP or Windows NT Print Server

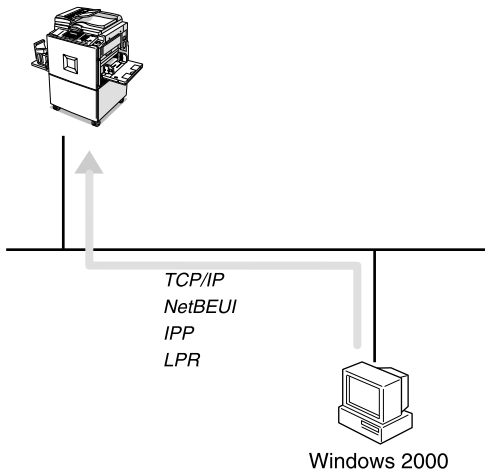


W95P2PSVE

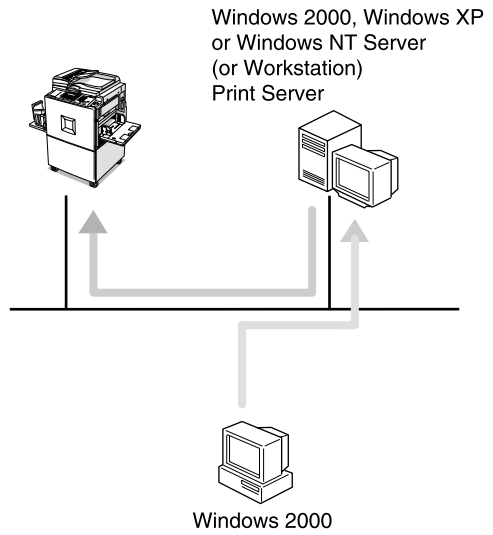
Windows 2000

For setting up the machine as a network printer in a Windows 2000 environment, see p.13 “Windows 2000 Configuration”. There are two methods for using the machine as a network printer.

❖Printing without a Print Server



❖Printing with a Windows 2000, Windows XP or Windows NT Print Server

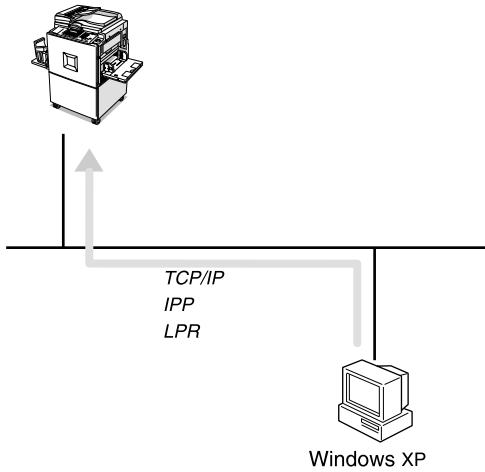


W2K2P2PSVE

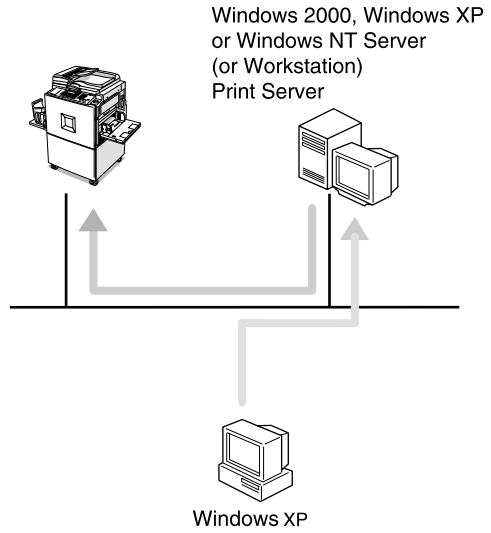
Windows XP

For setting up the machine as a network printer in a Windows XP environment, see p.27 “Windows XP Configuration”. There are two methods for using the machine as a network printer.

❖ **Printing without a Print Server**



❖ **Printing with a Windows 2000, Windows XP or Windows NT Print Server**

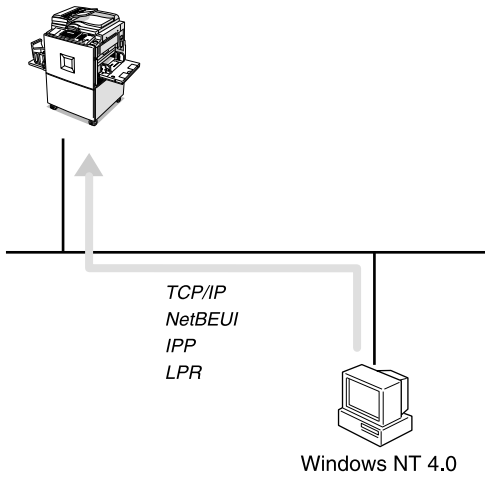


W2kP2PSVE

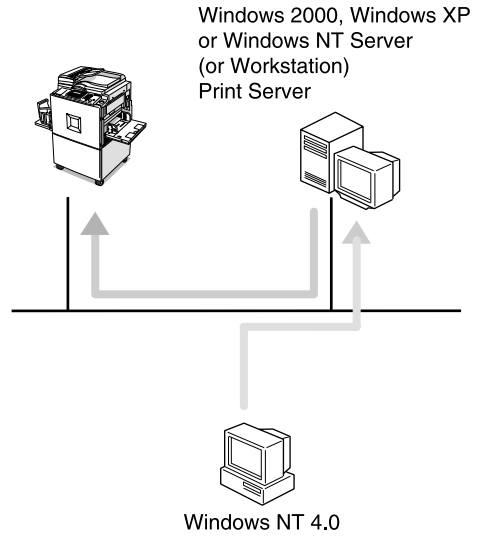
Windows NT 4.0

For setting up the machine as a network printer in a Windows NT 4.0 environment, see p.41 “Windows NT 4.0 Configuration”. There are two methods for using the machine as a network printer.

❖ **Printing without a Print Server**



❖ **Printing with a Windows 2000, Windows XP or Windows NT Print Server**



NT40P2PSVE

NetWare

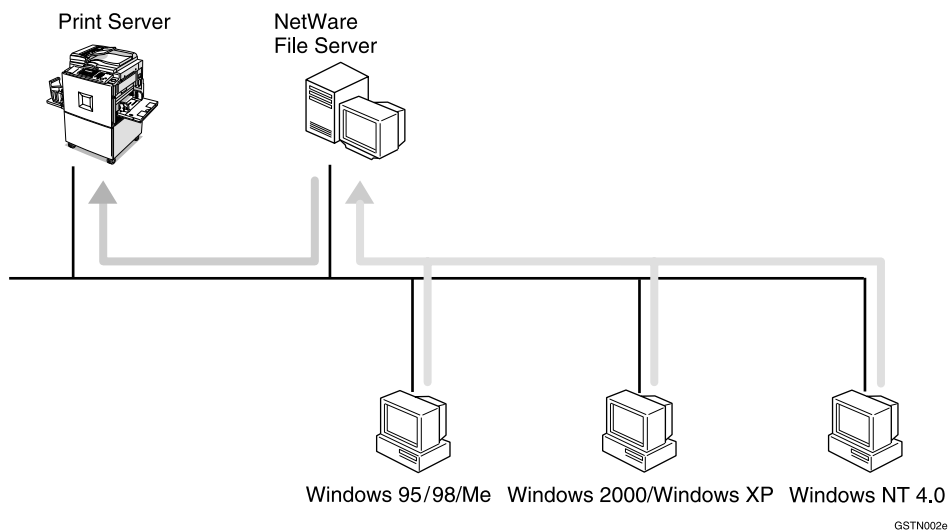
For setting up the machine as a network printer in a NetWare environment, see p.55 “NetWare Configuration”. The Network Interface Board allows you to use the machine as either a print server or a remote printer.

For more information about setting up the clients, see the following pages.

- Windows 95/98/Me ⇒ p.74 “Windows 95/98/Me”
- Windows 2000, Windows XP ⇒ p.75 “Windows 2000/Windows XP”
- Windows NT 4.0 ⇒ p.76 “Windows NT 4.0”

Configuring the machine as a print server

A dedicated NetWare print server is not required because the machine can be configured as a print server.

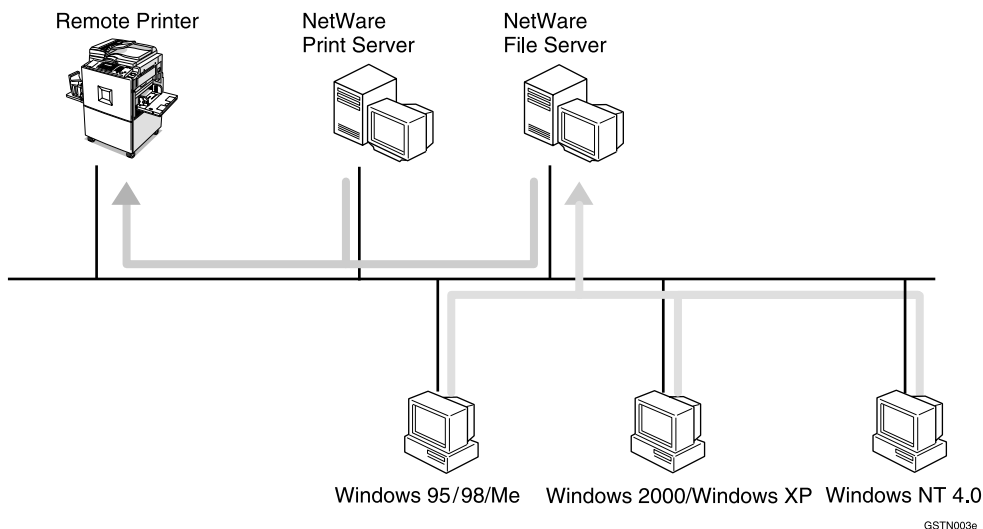


The actual procedures for configuring the machine depend on the NetWare version.

- NetWare 3.x ⇒ p.61 “Setting Up as a Print Server”
- NetWare 4.x, 5/5.1 ⇒ p.67 “Setting Up as a Print Server”

Configuring the machine as a remote printer

If a dedicated NetWare print server is being used, the machine should be configured as a remote printer.



The actual procedures for configuring the machine depend on the NetWare version.

- NetWare 3.x ⇒ p.63 "Setting Up as a Remote Printer"
- NetWare 4.x, 5/5.1 ⇒ p.71 "Setting Up as a Remote Printer"

Macintosh

For setting up the machine as a network printer in a Macintosh environment, see p.77 "Macintosh Configuration".

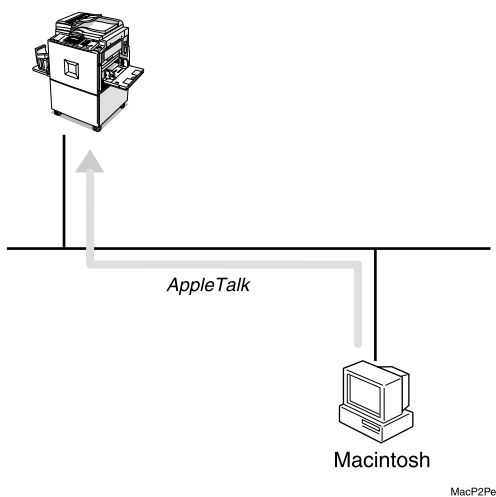


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1. Windows 95/98/Me Configuration

Configuring Windows 95/98/Me

Printing without a Print Server

The following procedure describes how to configure Windows 95/98/Me to use the machine on a network without a Windows 2000 Server, Windows 2000 Professional, Windows XP, Windows NT Server, Windows NT Workstation or NetWare based print server.

 indicates topics explained in this document

1. Specify the protocol to use

Consult your network administrator about which of the three protocols is appropriate.

TCP/IP

IPP

NetBEUI

2. Configure the chosen protocol



"Configuring TCP/IP and IPP for Printing"



"Configuring NetBEUI for Printing"

3. Select the appropriate software

If using the printer...

SmartNetMonitor
for Client

If managing printers...

SmartNetMonitor
for Admin

4. Install the software and set the printer driver port



"Using SmartNetMonitor for Client"

4. Install the software



"Using SmartNetMonitor for Admin"

setupguide

Printing with a Windows 2000/Windows XP or Windows NT Print Server

See p.10 "Setting Up a Client Computer" for configuring Windows 95/98/Me with a Windows 2000/Windows XP or Windows NT print server.

Configuring the Protocols

1

Configuring TCP/IP and IPP for Printing

These instructions are for configuring the Network Interface Board and Windows 95/98/Me to use the TCP/IP protocol and IPP.

Configuring the machine

Configure the machine to use the TCP/IP protocol.

- Make sure that the TCP/IP protocol is set to active. (The default is active.)
- Assign an IP address and make other settings required for using the TCP/IP protocol.

Reference

For more information about how to make the above settings, Printer Reference 1.

If DHCP is used to assign IP addresses, see p.119 “When Using DHCP”.

Note

- ❑ After setting the IP address, use the ping command to make sure that it has been set correctly.

① Enable the use of the command prompt as follows:

- On Windows 95 or Windows 98
Click **[Start]**, point to **[Programs]**, and then click **[MS-DOS Prompt]**.
- On Windows Me
Click **[Start]**, point to **[Programs]**, point to **[Accessories]**, and then click **[Command Prompt]**.

② Type the following: (192.168.15.16 is an example IP address.)

```
C:\> ping 192.168.15.16
```

If the address has been configured correctly, the following message appears.

```
Reply from 192.168.15.16 : bytes=32 time<10ms TTL=32
```

If the address has been configured incorrectly, the following message appears.

```
Request timed out.
```

Configuring a Windows 95/98/Me computer

These steps are for configuring a Windows 95/98/Me computer to use the TCP/IP protocol.

- 1** Open [Control Panel] and double-click the [Network] icon. Make sure that "TCP/IP" is listed in the [The following network components are installed:] box on the [Configuration] tab.

 **Note**

- If the TCP/IP protocol is not installed, click [Add] on the [Configuration] tab to install it. For more information about installing the TCP/IP protocol, see Windows 95/98/Me Help.

- 2** Configure the TCP/IP protocol with the appropriate IP address, subnet mask and other settings.

Check with the network administrator that the settings are correct.

Configuring NetBEUI for Printing

These instructions are for configuring the Network Interface Board and Windows 95/98/Me to use the NetBEUI protocol.

Configuring the machine

Configure the machine to use the NetBEUI protocol.

- Make sure that the NetBEUI protocol is set to active. (The default is active.)

 **Note**

- The NetBEUI settings are performed in Web Status Monitor or SmartNet-Monitor for Admin. See the corresponding online Help for details.

Configuring a Windows 95/98/Me computer

Install the NetBEUI protocol on the Windows 95/98/Me computer and set it as the default protocol.

- 1** Open [Control Panel] and double-click the [Network] icon. Make sure that "NetBEUI" is listed in the [The following network components are installed:] box on the [Configuration] tab.

 **Note**

- If the NetBEUI protocol is not installed, click [Add] on the [Configuration] tab to install it. For more information about installing the NetBEUI protocol, see Windows 95/98/Me Help.
- If "NetBEUI →Dial-Up Adaptor" is listed in the [The following network components are installed:] box, select it and click [Remove] to remove the binding.

1

- 2** Set the NetBEUI protocol as the default protocol. Click the [Configuration] tab, select "NetBEUI" in the [The following network components are installed:] box, and click [Properties].
- 3** Click the [Advanced] tab, select [Set this protocol to be the default protocol], and click [OK].
- 4** Click [OK] to close the [Network] dialog box.
- 5** Check the message to restart, and then click [Yes].

Using SmartNetMonitor for Client

SmartNetMonitor for Client is a utility for printing with the network printer using the TCP/IP, NetBEUI, and IPP protocols. The following features are available when using SmartNetMonitor for Client.

◆ SmartNetMonitor for Client features

- Sends a print job directly to the network printers without using a print server.
- Notifies when a printing error occurs.
- That print did completion (data transmission is finished) is informed.

Note

- Make sure to close all applications before beginning the installation process. Installing SmartNetMonitor for Client may require the computer to be restarted.

Installing SmartNetMonitor for Client

Follow the procedure below to install SmartNetMonitor for Client.

Note

- When there is a printing port used by PortNavi, Multi Direct Print and Printing System95, SmartNetMonitor for Client will take over.
- When using SmartNetMonitor for Admin, install SmartNetMonitor for Client after SmartNetMonitor for Admin is closed.
- Make sure to close all applications before beginning the installation process. Installing SmartNetMonitor for Client may require the computer to be restarted.

1 Insert the CD-ROM labeled “Printer Drivers and Utilities” into the CD-ROM drive.

2 Open [Control Panel], and double-click the [Add/Remove Programs] icon.

3 On the [Install/Uninstall] tab, click [Install].

4 Click [Next >].

5 Type the name of the CD-ROM drive in the [Command line for installation program] box, followed by “:\ NETWORK \ NETMON \ CLIENT \ DISK1 \ SETUP.EXE” (do not include the quotation marks), and then click [Finish].

Note

- An example would be “D:\ NETWORK \ NETMON \ CLIENT \ DISK1 \ SETUP.EXE” when the CD-ROM drive letter is “D”.

6 From the [Choose Setup Language] list, select the language you want to use, and then click [OK].

7 After the [Welcome] dialog box appears, click [Next >].

Follow the instructions on the screen.

After the installation is complete, configure the printer port with SmartNetMonitor for Client. ⇒ p.7 "Setting Up the Printer Driver"

 **Note**

- If the dialog box asking if you want to restart the computer appears, select [Yes, I want to restart my computer now.].

Deleting the port

The following procedure allows you to delete the printer port. If you want to delete the port which is currently used in Windows, switch the port to another such as "FILE", then delete it.

 **Reference**

For more information about SmartNetMonitor for Client, see SmartNetMonitor for Client Help.

1 From the [Printers] window, click the icon of the machine which uses SmartNetMonitor for Client to print. On the [File] menu, click [Properties].

2 Click the [Details] tab and make sure that the SmartNetMonitor for Client port is shown in the [Print to the following port:] box.

Remember the port name because this port should be deleted later.

3 From the [Print to the following port:] box, select [FILE].

4 Click [OK].

5 Click [Delete Port].

6 Click the SmartNetMonitor for Client port name as in step **2**, and then click [OK].

The port is deleted.

7 Click [OK] to close the Printer Properties.

Uninstalling SmartNetMonitor for Client

Preparation

Before uninstalling SmartNetMonitor for Client, make sure that:

- The port settings dialog box is closed.
- No printer is using the SmartNetMonitor for Client port as a printer port.

- 1** Open [Control Panel], and double-click the [Add/Remove Programs] icon.
- 2** On the [Install/Uninstall] tab, click [SmartNetMonitor for Client], and click [Add/Remove].
- 3** After the confirmation message appears, click [Yes].
UninstallShield removes all of the components of SmartNetMonitor for Client.
- 4** After the confirmation message appears, click [Yes].
- 5** Acknowledge the [Question] dialog box.
- 6** When the uninstallation is complete, click [OK].

Setting Up the Printer Driver

The following procedure allows you to configure the printer port to use SmartNetMonitor for Client.

Preparation

The target machine must be turned on before starting the installation process.

- 1** Install the printer driver of the machine you want to use.
- 2** From the [Printers] window, click the icon of the machine. On the [File] menu, click [Properties].
- 3** Click the [Details] tab, and then click [Add Port].
The [Add Port] dialog box appears.
- 4** Click [Other], click [SmartNetMonitor] from the list, and then click [OK].
The [Select Printer] dialog box appears.
The displayed items are as follows:
Model Name: The model name of the printer.
Printer Name: The name of the printer.
Comment: Additional information about the printer.
Address: The IP address of the printer.

5 Select the machine.

TCP/IP

- 1 Click **[TCP/IP]**, and then click **[search]**.

A list of printers that can be printed to by the TCP/IP protocol appears.

- 2 Click the machine you want to use, and then click **[OK]**.

 **Note**

- Printers that respond to an IP broadcast from the computer will be displayed. To print to a printer not listed here, click **[Specify Address]**, and then type the IP address or host name.

NetBEUI

- 1 Click **[NetBEUI]**, and then click **[search]**.

A list of printers that can be printed to by the NetBEUI protocol appears.

- 2 Click the machine you want to use, and then click **[OK]**.

 **Note**

- Printers that respond to a broadcast from the computer will be displayed. To print to a printer not listed here, click **[Specify Address]**, and then type the NetBEUI address. Make sure that the NetBEUI address is on the system configuration list. For information about the printing of the system configuration list, see Printer Reference 2.
- You cannot print to printers beyond routers.

IPP

- 1 Click **[IPP]**.

The IPP setting dialog box appears.

- 2 To specify the IP address of the machine, type "**http://machine's-ip-address/printer**" or "**ipp://machine's-ip-address/printer**" in the **[Printer URL]** field.

(192.168.15.16 is an example IP address)

http://192.168.15.16/printer

ipp://192.168.15.16/printer

- 3 If necessary, type a names to distinguish printers in **[IPP Port Name]**. Type a name different from any existing port names.

If you omit this, the address entered in **[Printer URL]** will be set as the IPP port name.

- 4 If using a proxy server and IPP user name, click **[Detailed Settings]** and configure the necessary settings.

 **Reference**

For more information about these settings, see SmartNetMonitor for Client Help.

- 6 Click **[OK]**.

- 7 Make sure that the specified printing port is displayed in the **[Print to the following Port:]** box, and then click **[OK]**.

This completes the settings.

To print, select the specified printer. SmartNetMonitor for Client will now direct print data to the printer automatically.

Changing Port Settings

Follow these steps to change SmartNetMonitor for Client settings, such as TCP/IP, the proxy server and IPP URL.

 **Note**

- There are no settings for the NetBEUI protocol.
- You can configure Timeout Settings for the TCP/IP protocol.

- 1 From the **[Printers]** window, click the icon of the machine you want to use. On the **[File]** menu, click **[Properties]**.

- 2 Click the **[Details]** tab, and then click **[Port Settings]**.

The **[Port Settings]** dialog box appears.

- For TCP/IP protocol, you can configure Timeout Settings.
- For IPP, you can configure User Settings or Proxy Settings.

 **Reference**

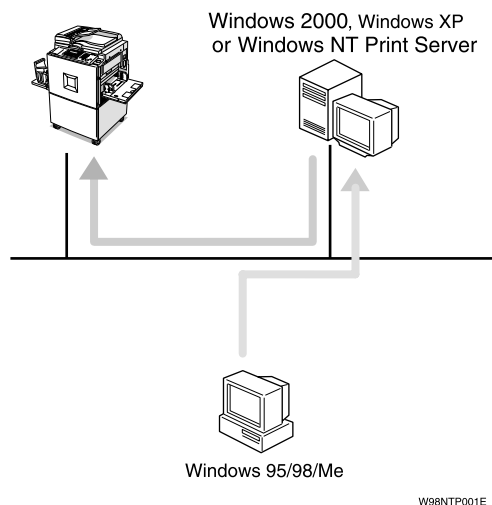
For more information about these settings, see SmartNetMonitor for Client Help.

Setting Up a Client Computer

1

This section describes the procedures for setting up a client on a network that uses Windows 2000/Windows XP, Windows NT Server or Windows NT Workstation as a print server.

When using a Windows 2000/Windows XP or Windows NT print server, select a shared printer on Windows 2000/Windows XP or Windows NT.



Note

- This section assumes that the client has already been configured to communicate with a Windows 2000 or Windows NT print server. Do not begin the following procedure until the client has been set up and configured correctly.

1 Install the printer driver as a local printer.

Reference

For more information about installing the printer driver, see Printer Reference 1.

Note

- Any port can be selected during the installation, however, LPT1 is recommended.

2 Click [Start], point to [Settings], and then click [Printers].

3 Click the icon of the machine you want to use. On the [File] menu, click [Properties].

4 Click the [Details] tab, and click [Add Port].

5 Click [Network], and click [Browse].

6 On the network tree, double-click the name of the computer used as a print server.

The printers connected to the network are displayed.

7 Click the name of the machine you want to use, and click [OK].

8 Click [OK].

9 Make sure that the port name is displayed in the [Print to the following port:] box, and click [OK].

2. Windows 2000 Configuration

Configuring Windows 2000

Printing without a Print Server

The following procedure describes how to configure Windows 2000 to use the machine on a network without a Windows 2000 Server, Windows 2000 Professional, Windows XP, Windows NT Server, Windows NT Workstation or NetWare based print server.

 indicates topics explained in this document

1. Specify the protocol to use

Consult your network administrator about which of the three protocols is appropriate.

TCP/IP

IPP

NetBEUI

2. Configure the chosen protocol



"Configuring TCP/IP and IPP for Printing"



"Configuring NetBEUI for Printing"

3. Select the appropriate software

If using the printer...

SmartNetMonitor
for Client

If managing printers...

SmartNetMonitor
for Admin

4. Install the software and set the printer driver port



"Using SmartNetMonitor for Client"

4. Install the software



"Using SmartNetMonitor for Admin"

setupguide

Printing with a Standard TCP/IP Port

Standard TCP/IP port is a standard port of Windows 2000 to enable Peer-to-Peer printing in a network environment.

For more information about Standard TCP/IP port settings, see Windows 2000 Help.

2

Note

- If a device model selection dialog box appears during the procedure to add the Standard TCP/IP port, select "RICOH Network Printer C Model".

Printing with a LPR Port

See p.23 "Configuring LPR Port Printing" for configuring a LPR port in Windows 2000.

Printing with a Windows 2000 or Windows NT Print Server

See p.24 "Setting Up a Client Computer" for configuring Windows 2000 with a Windows 2000/Windows XP or Windows NT print server.

Configuring the Protocols

Configuring TCP/IP and IPP for Printing

These instructions are for configuring the Network Interface Board and Windows 2000 to use the TCP/IP protocol and IPP.

Configuring the machine

Configure the machine to use the TCP/IP protocol.

- Make sure that the TCP/IP protocol is set to active. (The default is active.)
- Assign an IP address and make other settings required for using the TCP/IP protocol.

Reference

For more information about how to make the above settings, see Printer Reference 1.

If DHCP is used to assign IP addresses, see p.119 “When Using DHCP”.

Note

- ❑ After setting the IP address, use the ping command to make sure that it has been set correctly.

① Click **[Start]**, point to **[Programs]**, point to **[Accessories]**, and then click **[Command Prompt]**.

② Type the following: (192.168.15.16 is an example IP address.)

```
C:\> ping 192.168.15.16
```

If the address has been configured correctly, the following message appears.

```
Reply from 192.168.15.16 : bytes=32 time<10ms TTL=32
```

If the address has been configured incorrectly, the following message appears.

```
Request timed out.
```

Configuring a Windows 2000 computer

These steps are for configuring a Windows 2000 computer to use the TCP/IP protocol.

- 1** Click **[Start]** on the taskbar, point to **[Settings]**, and then click **[Network and Dial-up Connections]**.

- 2** Double-click **[Local Area Connection]**. On the **[General]** tab, click **[Properties]**.

- 3 Make sure that “Internet Protocol (TCP/IP)” is selected in the [Components checked are used by this connection:] box on the [General] tab.

 **Note**

- Select the TCP/IP protocol box if it is not already selected.
- If the TCP/IP protocol is not installed, click **[Install]** on the **[General]** tab to install it. For more information about installing the TCP/IP protocol, see Windows 2000 Help.

- 4 Configure the TCP/IP protocol with the appropriate IP address, subnet mask and other settings.

Check with the network administrator that the settings are correct.

Configuring NetBEUI for Printing

These instructions are for configuring the Network Interface Board and Windows 2000 to use the NetBEUI protocol.

Configuring the machine

Configure the machine to use the NetBEUI protocol.

- Make sure that the NetBEUI protocol is set to active. (The default is active.)

 **Note**

- The NetBEUI settings are performed in Web Status Monitor or SmartNet-Monitor for Admin. See the corresponding online Help for details.

Configuring a Windows 2000 computer

Follow these steps to configure a Windows 2000 computer to use the NetBEUI protocol.

- 1 Click **[Start]** on the taskbar, point to **[Settings]**, and then click **[Network and Dial-up Connections]**.
- 2 Double-click **[Local Area Connection]**. On the **[General]** tab, click **[Properties]**.
- 3 Make sure that the “NetBEUI Protocol” is selected in the [Components checked are used by this connection:] box on the [General] tab.

 **Note**

- Select the NetBEUI protocol box if it is not already selected.
- If the NetBEUI protocol is not installed, click **[Install]** on the **[General]** tab to install it. For more information about installing the NetBEUI protocol, see Windows 2000 Help.

Using SmartNetMonitor for Client

SmartNetMonitor for Client is a utility for printing with the network printer using the TCP/IP, NetBEUI, and IPP protocols. The following features are available when using SmartNetMonitor for Client.

◆ SmartNetMonitor for Client features

- Sends a print job directly to the network printers without using a print server.
- Notifies when a printing error occurs.
- That print did completion (data transmission is finished) is informed.

! Limitation

- ❑ On a computer that is used as a print server, do not use the features such as Notify. For more information about turning off these features, see SmartNetMonitor for Client Help.

✎ Note

- ❑ Make sure to close all applications before beginning the installation process. Installing SmartNetMonitor for Client may require the computer to be restarted.

Installing SmartNetMonitor for Client

Follow the procedure below to install SmartNetMonitor for Client.

✎ Note

- ❑ When there is a printing port used by PortNavi, Multi Direct Print and Printing System95, SmartNetMonitor for Client will take over.
- ❑ When using SmartNetMonitor for Admin, install SmartNetMonitor for Client after SmartNetMonitor for Admin is closed.
- ❑ Make sure to close all applications before beginning the installation process. Installing SmartNetMonitor for Client may require the computer to be restarted.

1 Insert the CD-ROM labeled “Printer Drivers and Utilities” into the CD-ROM drive.

2 Open [Control Panel], and double-click the [Add/Remove Programs] icon.

3 On the [Add New Programs] tab, click [CD or Floppy].

4 Click [Next >].

- 5** Type the name of the CD-ROM drive in the [Open] box, followed by “:\ NETWORK \ NETMON \ CLIENT \ DISK1 \ SETUP.EXE” (do not include the quotation marks), and then click [Finish].

 **Note**

- An example would be “D:\ NETWORK \ NETMON \ CLIENT \ DISK1 \ SETUP.EXE” when the CD-ROM drive letter is “D”.

2

- 6** From the [Choose Setup Language] list, select the language you want to use, and then click [OK].

- 7** After the [Welcome] dialog box appears, click [Next >].

Follow the instructions on the screen.

After the installation is complete, configure the printer port with SmartNetMonitor for Client. ⇒ p.20 “Setting Up the Printer Driver”

 **Note**

- If the dialog box asking if you want to restart the computer appears, select [Yes, I want to restart my computer now.].

Deleting the port

The following procedure allows you to delete the printer port. If you want to delete the port which is currently used in Windows, switch the port to another such as “FILE”, then delete it.

 **Reference**

For more information about SmartNetMonitor for Client, see SmartNetMonitor for Client Help.

- 1** From the [Printers] window, click the icon of the machine which uses SmartNetMonitor for Client to print. On the [File] menu, click [Properties].

- 2** Click the [Ports] tab and make sure that the SmartNetMonitor for Client port is shown in the [Print to the following port(s)] box.

Remember the port name because this port should be deleted later.

- 3** Select the [FILE] check box in the [Port] column.

- 4** Click [OK] to close the Printer Properties.

The port which is currently in use is changed.

- 5** Open the Printer Properties of the same machine.

- 6** Select the [Ports] tab.

- 7** At the [Port] column in the [Print to the following port(s)] dialog box, click to select the SmartNetMonitor for Client port name as in step **2**.

- 8** Click **[Delete Port]**.
- 9** After the confirmation message appears, click **[Yes]**.
The port is deleted.
- 10** Click **[Close]** to close the **Printer Properties**.

Uninstalling SmartNetMonitor for Client

2

Preparation

Before uninstalling SmartNetMonitor for Client, make sure that:

- The port settings dialog box is closed.
- No printer is using the SmartNetMonitor for Client port as a printer port.
- You have performed login with the same user authority as that used to install SmartNetMonitor for Client.

- 1** Open **[Control Panel]**, and double-click the **[Add/Remove Programs]** icon.
- 2** Click the **[Change or Remove Programs]** tab, click **[SmartNetMonitor for Client]**, and click **[Change/Remove]**.
- 3** After the confirmation message appears, click **[Yes]**.
UninstallShield removes all of the components of SmartNetMonitor for Client.
- 4** After the confirmation message appears, click **[Yes]**.
- 5** Acknowledge the **[Remove Shared File?]** dialog box.
- 6** When the uninstallation is complete, click **[OK]**.

Setting Up the Printer Driver

The following procedure allows you to configure the printer port to use SmartNetMonitor for Client.

Preparation

The target machine must be turned on before starting the installation process.

- 1** Install the printer driver of the machine you want to use.
- 2** From the [Printers] window, click the icon of the machine. On the [File] menu, click [Properties].
- 3** Click the [Ports] tab, and then click [Add Port].

The [Add Port] dialog box appears.

- 4** Click [SmartNetMonitor] in the [Available port types:] box, and then click [New Port].

The [Select Printer] dialog box appears.

The displayed items are as follows:

Model Name: The model name of the printer.

Printer Name: The name of the printer.

Comment: Additional information about the printer.

Address: The IP address of the printer.

- 5** Select the machine.

TCP/IP

- 1** Click [TCP/IP], and then click [search].

A list of printers that can be printed to by the TCP/IP protocol appears.

- 2** Click the machine you want to use, and then click [OK].

Note

- Printers that respond to an IP broadcast from the computer will be displayed. To print to a printer not listed here, click [Specify Address], and then type the IP address or host name.

NetBEUI

- 1 Click **[NetBEUI]**, and then **[search]**.

A list of printers that can be printed by the NetBEUI protocol appears.

- 2 Click the printer you want to use, and then click **[OK]**.

Note

- Printers that respond to a broadcast from the computer will be displayed. To print to a printer not listed here, click **[Specify Address]**, and then type the NetBEUI address. Make sure that the NetBEUI address is on the system configuration list. For information about the printing of the system configuration list, see Printer Reference 2.
- You cannot print to printers beyond routers.

IPP

- 1 Click **[IPP]**.

The IPP setting dialog box appears.

- 2 To specify the IP address of the machine, type "**http://machine's-ip-address/printer**" or "**ipp://machine's-ip-address/printer**" in the **[Printer URL]** field.

(192.168.15.16 is an example IP address.)

`http://192.168.15.16/printer`

`ipp://192.168.15.16/printer`

- 3 If necessary, type a name to distinguish printers in **[IPP Port Name]**. Type a name different from any existing port names.

If you omit this, the address entered in **[Printer URL]** will be set as the IPP port name.

- 4 If using a proxy server and IPP user name, click **[Detailed Settings]** and configure the necessary settings.

Reference

For more information about these settings, see SmartNetMonitor for Client Help.

- 5 Click **[OK]**.

- 6 Click **[OK]**.

- 7 Click **[Close]**.

- 8 Make sure that the specified printing port is displayed in the **[Print to the following Port(s)]** box, and then click **[OK]**.

This completes the settings.

To print, select the specified printer. SmartNetMonitor for Client will now direct print data to the printer automatically.

Changing Port Settings

Follow these steps to change SmartNetMonitor for Client settings, such as TCP/IP, the proxy server and IPP URL.

 **Note**

There are no settings for the NetBEUI protocol.

1 From the [Printers] window, click the icon of the machine you want to use. On the [File] menu, click [Properties].

2 Click the [Ports] tab, and then click [Configure Port].

The [Port Configuration] dialog box appears.

- For TCP/IP protocol, you can configure Timeout Settings.
- For IPP, you can configure User Settings or Proxy Settings.

 **Reference**

For more information about these settings, see SmartNetMonitor for Client Help.

Configuring LPR Port Printing

This section explains the procedure for printing to a LPR port from Windows 2000.

Note

- The following procedure assumes that the printer drivers have already been installed. This is the procedure to change the printer port to LPR.
- The TCP/IP protocols must be installed and configured correctly. For more information about configuring the protocols, see p.15 “Configuring TCP/IP and IPP for Printing”.

- 1** Click **[Start]**, point to **[Settings]**, and then click **[Printers]**.
- 2** Click the icon of the machine you want to use. On the **[File]** menu, click **[Properties]**.
- 3** Click the **[Ports]** tab, and then click **[Add Port]**.
- 4** In the **[Available port types:]** box, click “LPR Port”, and then click **[New Port]**.

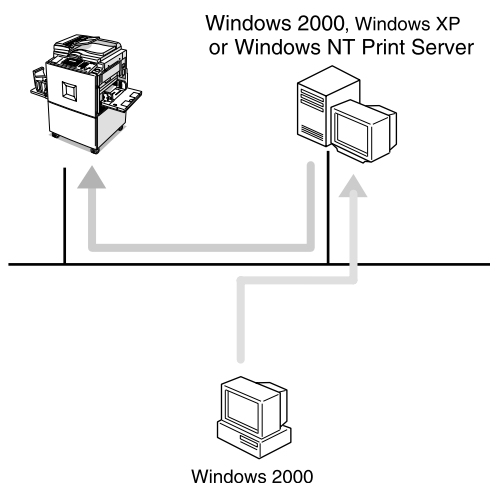
Note

- If “LPR Port” does not appear, “Print Services for Unix” has not been installed.
- 5** Type the IP address of the Network Interface Board into the **[Name or address of server providing lpd:]** box.
 - 6** Type “lp” into the **[Name of printer or print queue on that server:]** box, and click **[OK]**.
 - 7** Click **[Close]**.
 - 8** Make sure that the port name is displayed in the **[Print to the following port(s)]** box and the check box is selected, and then click **[OK]**.

Setting Up a Client Computer

This section describes the procedures for setting up a client on a network that uses Windows 2000/Windows XP, Windows NT Server or Windows NT Workstation as a print server.

When using a Windows 2000/Windows XP, Windows NT print server, select a shared printer on Windows 2000/Windows XP or Windows NT.



W2kNTP001E

Note

- ❑ This section assumes that the client has already been configured to communicate with a Windows 2000 or Windows NT print server. Do not begin the following procedure until the client has been set up and configured correctly.

Use the [Printers] window to set up the machine.

- 1 Click [Start], point to [Settings], and then click [Printers].
- 2 Double-click the [Add Printer] icon.
This launches the Add Printer Wizard.
- 3 Click [Next >].
- 4 Click [Network printer], and click [Next >].
- 5 Click [Next >].
- 6 In the [Shared printers:] box, double-click the name of the computer used as a print server.
The printers attached to the network are displayed.

7 Click the machine you want to use, and click **[Next >]**.

 **Note**

- If the printer driver is not installed in the print server, a message appears. If a driver has been installed on the client, click **[OK]**, and follow the instructions on the screen.
- There is a Windows 2000 printer driver on the CD-ROM labeled “Printer Drivers and Utilities”.

8 Select whether to use this machine as the default printer, and click **[Next >]**.

9 After the installation is complete, click **[Finish]**.

The icon of the newly installed printer appears in the **[Printers]** window.

3. Windows XP Configuration

Configuring Windows XP

Printing without a Print Server

The following procedure describes how to configure Windows XP to use the machine on a network without a Windows 2000 Server, Windows 2000 Professional, Windows XP, Windows NT Server, Windows NT Workstation or NetWare based print server.

 indicates topics explained in this document

1. Specify the protocol to use

Consult your network administrator about which of the three protocols is appropriate.

TCP/IP

IPP

2. Configure the chosen protocol

 "Configuring TCP/IP and IPP for Printing"

3. Select the appropriate software


If using the printer...

SmartNetMonitor
for Client


If managing printers...

SmartNetMonitor
for Admin

4. Install the software and set the printer driver port

 "Using SmartNetMonitor for Client"

4. Install the software

 "Using SmartNetMonitor for Admin"

setupguide

Printing with a Standard TCP/IP Port

Standard TCP/IP port is a standard port of Windows XP to enable Peer-to-Peer printing in a network environment.

For more information about Standard TCP/IP port settings, see Windows 2000 Help.

 **Note**

- If a device model selection dialog box appears during the procedure to add the Standard TCP/IP port, select "RICOH Network Printer C Model".

3

Printing with a LPR Port

See p.37 "Configuring LPR Port Printing" for configuring a LPR port in Windows XP.

Printing with a Windows 2000/Windows XP or Windows NT Print Server

See p.38 "Setting Up a Client Computer" for configuring Windows XP with a Windows 2000/Windows XP or Windows NT print server.

Configuring the Protocols

Configuring TCP/IP and IPP for Printing

These instructions are for configuring the Network Interface Board and Windows XP to use the TCP/IP protocol and IPP.

Configuring the machine

Configure the machine to use the TCP/IP protocol.

- Make sure that the TCP/IP protocol is set to active. (The default is active.)
- Assign an IP address and make other settings required for using the TCP/IP protocol.

Reference

For more information about how to make the above settings, see Printer Reference 1.

If DHCP is used to assign IP addresses, see p.119 “When Using DHCP”.

Note

❑ After setting the IP address, use the ping command to make sure that it has been set correctly.

① Click **[Start]**, point to **[Programs]**, point to **[Accessories]**, and then click **[Command Prompt]**.

② Type the following: (192.168.15.16 is an example IP address.)

```
C:\> ping 192.168.15.16
```

If the address has been configured correctly, the following message appears.

```
Reply from 192.168.15.16 : bytes=32 time<10ms TTL=32
```

If the address has been configured incorrectly, the following message appears.

```
Request timed out.
```

Configuring a Windows XP computer

These steps are for configuring a Windows XP computer to use the TCP/IP protocol.

1 Click **[Start]** on the taskbar, point to **[Settings]**, and then click **[Network and Dial-up Connections]**.

2 Double-click **[Local Area Connection]**. On the **[General]** tab, click **[Properties]**.

3 Make sure that “Internet Protocol (TCP/IP)” is selected in the [Components checked are used by this connection:] box on the [General] tab.

 **Note**

- Select the TCP/IP protocol box if it is not already selected.
- If the TCP/IP protocol is not installed, click **[Install]** on the **[General]** tab to install it. For more information about installing the TCP/IP protocol, see Windows XP Help.

4 Configure the TCP/IP protocol with the appropriate IP address, subnet mask and other settings.

Check with the network administrator that the settings are correct.

Using SmartNetMonitor for Client

SmartNetMonitor for Client is a utility for printing with the network printer using the TCP/IP, and IPP protocols. The following features are available when using SmartNetMonitor for Client.

◆ SmartNetMonitor for Client features

- Sends a print job directly to the network printers without using a print server.
- Notifies when a printing error occurs.
- That print did completion (data transmission is finished) is informed.

! Limitation

- ❑ On a computer that is used as a print server, do not use the features such as Notify. For more information about turning off these features, see SmartNetMonitor for Client Help.

✎ Note

- ❑ Make sure to close all applications before beginning the installation process. Installing SmartNetMonitor for Client may require the computer to be restarted.

Installing SmartNetMonitor for Client

Follow the procedure below to install SmartNetMonitor for Client.

✎ Note

- ❑ When there is a printing port used by PortNavi, Multi Direct Print and Printing System95, SmartNetMonitor for Client will take over.
- ❑ When using SmartNetMonitor for Admin, install SmartNetMonitor for Client after SmartNetMonitor for Admin is closed.
- ❑ Make sure to close all applications before beginning the installation process. Installing SmartNetMonitor for Client may require the computer to be restarted.

- 1** Insert the CD-ROM labeled “Printer Drivers and Utilities” into the CD-ROM drive.
- 2** Open [Control Panel], and double-click the [Add/Remove Programs] icon.
- 3** On the [Add New Programs] tab, click [CD or Floppy].
- 4** Click [Next >].

5 Type the name of the CD-ROM drive in the [Open] box, followed by “:\ NETWORK \ NETMON \ CLIENT \ DISK1 \ SETUP.EXE” (do not include the quotation marks), and then click [Finish].

 **Note**

- An example would be “D:\ NETWORK \ NETMON \ CLIENT \ DISK1 \ SETUP.EXE” when the CD-ROM drive letter is “D”.

6 From the [Choose Setup Language] list, select the language you want to use, and then click [OK].

7 After the [Welcome] dialog box appears, click [Next >].

Follow the instructions on the screen.

After the installation is complete, configure the printer port with SmartNetMonitor for Client. ⇒ p.34 “Setting Up the Printer Driver”

 **Note**

- If the dialog box asking if you want to restart the computer appears, select [Yes, I want to restart my computer now.].

Deleting the port

The following procedure allows you to delete the printer port. If you want to delete the port which is currently used in Windows, switch the port to another such as “FILE”, then delete it.

 **Reference**

For more information about SmartNetMonitor for Client, see SmartNetMonitor for Client Help.

1 From the [Printers] window, click the icon of the machine which uses SmartNetMonitor for Client to print. On the [File] menu, click [Properties].

2 Click the [Ports] tab and make sure that the SmartNetMonitor for Client port is shown in the [Print to the following port(s)] box.

Remember the port name because this port should be deleted later.

3 Select the [FILE] check box in the [Port] column.

4 Click [OK] to close the Printer Properties.

The port which is currently in use is changed.

5 Open the Printer Properties of the same machine.

6 Select the [Ports] tab.

7 At the [Port] column in the [Print to the following port(s)] dialog box, click to select the SmartNetMonitor for Client port name as in step **2**.

- 8** Click **[Delete Port]**.
- 9** After the confirmation message appears, click **[Yes]**.
The port is deleted.
- 10** Click **[Close]** to close the **Printer Properties**.

Uninstalling SmartNetMonitor for Client

Preparation

Before uninstalling SmartNetMonitor for Client, make sure that:

- The port settings dialog box is closed.
- No printer is using the SmartNetMonitor for Client port as a printer port.
- You have performed login with the same user authority as that used to install SmartNetMonitor for Client.

- 1** Open **[Control Panel]**, and double-click the **[Add/Remove Programs]** icon.
- 2** Click the **[Change or Remove Programs]** tab, click **[SmartNetMonitor for Client]**, and click **[Change/Remove]**.
- 3** After the confirmation message appears, click **[Yes]**.
UninstallShield removes all of the components of SmartNetMonitor for Client.
- 4** After the confirmation message appears, click **[Yes]**.
- 5** Acknowledge the **[Remove Shared File?]** dialog box.
- 6** When the uninstallation is complete, click **[OK]**.

Setting Up the Printer Driver

The following procedure allows you to configure the printer port to use SmartNetMonitor for Client.

Preparation

The target machine must be turned on before starting the installation process.

- 1** Install the printer driver of the machine you want to use.
- 2** From the [Printers] window, click the icon of the machine. On the [File] menu, click [Properties].
- 3** Click the [Ports] tab, and then click [Add Port].

The [Add Port] dialog box appears.

- 4** Click [SmartNetMonitor] in the [Available port types:] box, and then click [New Port].

The [Select Printer] dialog box appears.

The displayed items are as follows:

Model Name: The model name of the printer.

Printer Name: The name of the printer.

Comment: Additional information about the printer.

Address: The IP address of the printer.

- 5** Select the machine.

TCP/IP

- 1** Click [TCP/IP], and then click [search].

A list of printers that can be printed to by the TCP/IP protocol appears.

- 2** Click the machine you want to use, and then click [OK].

Note

- Printers that respond to an IP broadcast from the computer will be displayed. To print to a printer not listed here, click [Specify Address], and then type the IP address or host name.

IPP

1 Click **[IPP]**.

The IPP setting dialog box appears.

2 To specify the IP address of the machine, type "**http://machine's-ip-address/printer**" or "**ipp://machine's-ip-address/printer**" in the **[Printer URL]** field.

(192.168.15.16 is an example IP address.)

```
http://192.168.15.16/printer
```

```
ipp://192.168.15.16/printer
```

3 If necessary, type a name to distinguish the printers in **[IPP Port Name]**. Type a name different from any existing port names.

If you omit this, the address entered in **[Printer URL]** will be set as the IPP port name.

4 If using a proxy server and IPP user name, click **[Detailed Settings]** and configure the necessary settings. **Reference**

For more information about these settings, see SmartNetMonitor for Client Help.

5 Click **[OK]**.**6** Click **[OK]**.**7** Click **[Close]**.**8** Make sure that the specified printing port is displayed in the **[Print to the following Port(s)]** box, and then click **[OK]**.

This completes the settings.

To print, select the specified printer. SmartNetMonitor for Client will now direct print data to the printer automatically.

Changing Port Settings

Follow these steps to change SmartNetMonitor for Client settings, such as TCP/IP, the proxy server and IPP URL.

1 From the [Printers] window, click the icon of the machine you want to use. On the [File] menu, click [Properties].

2 Click the [Ports] tab, and then click [Configure Port].

The [Port Configuration] dialog box appears.

- For TCP/IP protocol, you can configure Timeout Settings.
- For IPP, you can configure User Settings or Proxy Settings.

Reference

For more information about these settings, see SmartNetMonitor for Client Help.

Configuring LPR Port Printing

This section explains the procedure for printing to a LPR port from Windows XP.

Note

- The following procedure assumes that the printer drivers have already been installed. This is the procedure to change the printer port to LPR.
- The TCP/IP protocols must be installed and configured correctly. For more information about configuring the protocols, see p.29 “Configuring TCP/IP and IPP for Printing”.

- 1** Click **[Start]**, point to **[Settings]**, and then click **[Printers]**.
- 2** Click the icon of the machine you want to use. On the **[File]** menu, click **[Properties]**.
- 3** Click the **[Ports]** tab, and then click **[Add Port]**.
- 4** In the **[Available port types:]** box, click “LPR Port”, and then click **[New Port]**.

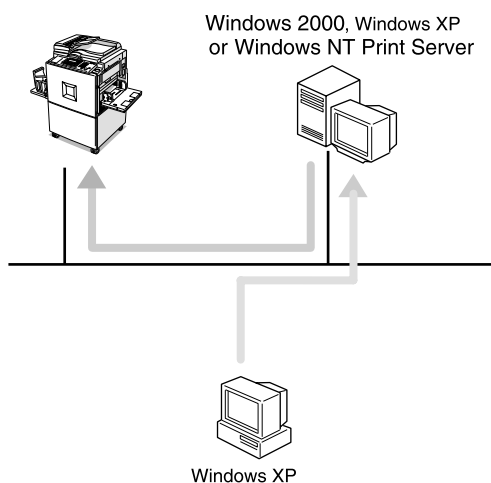
Note

- If “LPR Port” does not appear, “Print Services for Unix” has not been installed.
- 5** Type the IP address of the Network Interface Board into the **[Name or address of server providing lpd:]** box.
 - 6** Type “lp” into the **[Name of printer or print queue on that server:]** box, and click **[OK]**.
 - 7** Click **[Close]**.
 - 8** Make sure that the port name is displayed in the **[Print to the following port(s)]** box and the check box is selected, and then click **[OK]**.

Setting Up a Client Computer

This section describes the procedures for setting up a client on a network that uses Windows 2000/Windows XP, Windows NT Server or Windows NT Workstation as a print server.

When using a Windows 2000/Windows XP, Windows NT print server, select a shared printer on Windows 2000/Windows XP or Windows NT.



W2kNTP001E

Note

- ❑ This section assumes that the client has already been configured to communicate with a Windows 2000/Windows XP or Windows NT print server. Do not begin the following procedure until the client has been set up and configured correctly.

Use the **[Printers]** window to set up the machine.

- 1** Click **[Start]**, point to **[Settings]**, and then click **[Printers]**.
- 2** Double-click the **[Add Printer]** icon.
This launches the Add Printer Wizard.
- 3** Click **[Next >]**.
- 4** Click **[Network printer]**, and click **[Next >]**.
- 5** Click **[Next >]**.
- 6** In the **[Shared printers:]** box, double-click the name of the computer used as a print server.
The printers attached to the network are displayed.

7 Click the machine you want to use, and click **[Next >]**.

 **Note**

- If the printer driver is not installed in the print server, a message appears. If a driver has been installed on the client, click **[OK]**, and follow the instructions on the screen.
- There is a Windows XP printer driver on the CD-ROM labeled “Printer Drivers and Utilities”.

8 Select whether to use this machine as the default printer, and click **[Next >]**.

9 After the installation is complete, click **[Finish]**.

The icon of the newly installed printer appears in the **[Printers]** window.

4. Windows NT 4.0 Configuration

Configuring Windows NT 4.0

Printing without a Print Server

The following procedure describes how to configure Windows NT 4.0 to use the machine on a network without a Windows 2000 Server, Windows 2000 Professional, Windows XP, Windows NT Server, Windows NT Workstation or NetWare based print server.

 indicates topics explained in this document

1. Specify the protocol to use

Consult your network administrator about which of the three protocols is appropriate.

TCP/IP

IPP

NetBEUI

2. Configure the chosen protocol



"Configuring TCP/IP and IPP for Printing"



"Configuring NetBEUI for Printing"

3. Select the appropriate software

If using the printer...

SmartNetMonitor
for Client

If managing printers...

SmartNetMonitor
for Admin

4. Install the software and set the printer driver port



"Using SmartNetMonitor for Client"

4. Install the software



"Using SmartNetMonitor for Admin"

setupguide

Printing with a LPR Port

See p.52 “Configuring LPR Port Printing” for configuring a LPR port in Windows NT 4.0.

Printing with a Windows 2000/Windows XP or Windows NT Print Server

See p.53 “Setting Up a Client Computer” for configuring Windows NT 4.0 with a Windows 2000/Windows XP or Windows NT print server.

Configuring the Protocols

Configuring TCP/IP and IPP for Printing

These instructions are for configuring the Network Interface Board and Windows NT to use the TCP/IP protocol and IPP.

Configuring the machine

Configure the machine to use the TCP/IP protocol.

- Make sure that the TCP/IP protocol is set to active. (The default is active.)
- Assign an IP address and make other settings required for using the TCP/IP protocol.

Reference

For more information about how to make the above settings, see Printer Reference 1.

If DHCP is used to assign IP addresses, see p.119 “When Using DHCP”.

Note

- ❑ After setting the IP address, use the ping command to make sure that it has been set correctly.

① Click **[Start]**, point to **[Programs]**, and then click **[Command Prompt]**.

② Type the following: (192.168.15.16 is an example IP address.)

```
C:\> ping 192.168.15.16
```

If the address has been configured correctly, the following message appears.

```
Reply from 192.168.15.16 : bytes=32 time<10ms TTL=32
```

If the address has been configured incorrectly, the following message appears.

```
Request timed out.
```

Configuring a Windows NT computer

These steps are for configuring a Windows NT computer to use the TCP/IP protocol.

1 Open **[Control Panel]** and double-click the **[Network]** icon. Make sure that “TCP/IP Protocol” is listed in the **[Network Protocols:]** box on the **[Protocols]** tab.

 **Note**

If the TCP/IP protocol is not installed, click **[Add]** on the **[Protocols]** tab to install it. For more information about installing the TCP/IP protocol, see Windows NT Help.

4

2 Configure the TCP/IP protocols with the appropriate IP address, subnet mask and other settings.

Check with the network administrator that the settings are correct.

3 Click the **[Services]** tab, and make sure that “Microsoft TCP/IP Printing” is installed.

If “Microsoft TCP/IP Printing” is not installed, click **[Add]** on the **[Services]** tab to install it. For more information about installing and configuring network services, see Windows NT Help.

Configuring NetBEUI for Printing

These instructions are for configuring the Network Interface Board and Windows NT to use the NetBEUI protocol.

Configuring the machine

Configure the machine to use the NetBEUI protocol.

- Make sure that the NetBEUI protocol is set to active. (The default is active.)

 **Note**

- The NetBEUI settings are performed in Web Status Monitor or SmartNet-Monitor for Admin. See the corresponding online Help for details.

Configuring a Windows NT computer

Install the NetBEUI protocol on the Windows NT computer, and change the LAN adapter number (Lana Number).

- 1** Open **[Control Panel]** and double-click the **[Network]** icon. Make sure that “NetBEUI Protocol” is listed in the **[Network Protocols:]** box on the **[Protocols]** tab.

 **Note**

- If the NetBEUI protocol is not installed, click **[Add]** on the **[Protocols]** tab to install it. For more information about installing the NetBEUI protocol, see Windows NT Help.

- 2** Change the Lana Number. Click the **[Services]** tab, click “NetBIOS Interface” in the **[Services]** tab, and click **[Properties]**.

- 3** Click the Lana Number corresponding the Nbf protocol of the **[Network Route]** headline, and click **[Edit]**.

- 4** Type “0” as the Lana Number.

 **Note**

- If the other protocol's Lana Number is configured with “0”, you must change the Lana Number to a number other than “0”.

- 5** Click **[OK]**.

- 6** Click **[Close]** to close the **[Network]** dialog box.

- 7** Check the message to restart, and then click **[Yes]**.

 **Note**

- After you change the Lana Number, you must restart the computer.

Using SmartNetMonitor for Client

SmartNetMonitor for Client is a utility for printing with the network printer using the TCP/IP, NetBEUI, and IPP protocols. The following features are available when using SmartNetMonitor for Client.

◆ SmartNetMonitor for Client features

- Sends a print job directly to the network printers without using a print server.
- Notifies when a printing error occurs.
- That print did completion (data transmission is finished) is informed.

! Limitation

- ❑ On a computer that is used as a print server, do not use the features such as Notify. For more information about turning off these features, see SmartNetMonitor for Client Help.

✎ Note

- ❑ Make sure to close all applications before beginning the installation process. Installing SmartNetMonitor for Client may require the computer to be restarted.

Installing SmartNetMonitor for Client

Follow the procedure below to install SmartNetMonitor for Client.

✎ Note

- ❑ When there is a printing port used by PortNavi, Multi Direct Print and Printing System95, SmartNetMonitor for Client will take over.
- ❑ When using SmartNetMonitor for Admin, install SmartNetMonitor for Client after SmartNetMonitor for Admin is closed.
- ❑ Make sure to close all applications before beginning the installation process. Installing SmartNetMonitor for Client may require the computer to be restarted.

1 Insert the CD-ROM labeled “Printer Drivers and Utilities” into the CD-ROM drive.

2 Open [Control Panel], and double-click the [Add/Remove Programs] icon.

3 On the [Install/Uninstall] tab, click [Install].

4 Click [Next >].

- 5** Type the name of the CD-ROM drive in the [Command line for installation program] box, followed by “:\ NETWORK \ NETMON \ CLIENT \ DISK1 \ SETUP.EXE” (do not include the quotation marks), and then click [Finish].

 **Note**

- An example would be “D:\ NETWORK \ NETMON \ CLIENT \ DISK1 \ SETUP.EXE” when the CD-ROM drive letter is “D”.

- 6** From the [Choose Setup Language] list, select the language you want to use, and then click [OK].

- 7** After the [Welcome] dialog box appears, click [Next >].

Follow the instructions on the screen.

After the installation is complete, configure the printer port with SmartNetMonitor for Client. ⇒ p.49 “Setting Up the Printer Driver”

 **Note**

- If the dialog box asking if you want to restart the computer appears, select [Yes, I want to restart my computer now.].

Deleting the port

The following procedure allows you to delete the printer port. If you want to delete the port which is currently used in Windows, switch the port to another such as “FILE”, then delete it.

 **Reference**

For more information about SmartNetMonitor for Client, see SmartNetMonitor for Client Help.

- 1** From the [Printers] window, click the icon of the machine which uses SmartNetMonitor for Client to print. On the [File] menu, click [Properties].

- 2** Click the [Ports] tab and make sure that the SmartNetMonitor for Client port is shown in the [Print to the following port(s)] box.

Remember the port name because this port should be deleted later.

- 3** From the [Print to the following port(s)] box, select [FILE].

- 4** Click [OK].

The port which is currently in use is changed.

- 5** Click [Delete Port].

- 6** After the confirmation message appears, click [Yes].

The port is deleted.

- 7** Click [OK] to close the Printer Properties.

Uninstalling SmartNetMonitor for Client

Preparation

Before uninstalling SmartNetMonitor for Client, make sure that:

- The port settings dialog box is closed.
- No printer is using the SmartNetMonitor for Client port as a printer port.
- You have performed login with the same user authority as that used to install SmartNetMonitor for Client.

1 Open [Control Panel], and double-click the [Add/Remove Programs] icon.

2 On the [Install/Uninstall] tab, click [SmartNetMonitor for Client], and click [Add/Remove].

3 After the confirmation message appears, click [Yes].

UninstallShield removes all of the components of SmartNetMonitor for Client.

4 After the confirmation message appears, click [Yes].

5 Acknowledge the [Remove Shared File?] dialog box.

6 When the uninstallation is complete, click [OK].

Setting Up the Printer Driver

The following procedure allows you to configure the printer port to use SmartNetMonitor for Client.

Preparation

The target machine must be turned on before starting the installation process.

- 1** Install the printer driver of the machine you want to use.
- 2** From the [Printers] window, click the icon of the machine. On the [File] menu, click [Properties].
- 3** Click the [Ports] tab, and then click [Add Port].

The [Add Port] dialog box appears.

- 4** Click [SmartNetMonitor] from the list, and then click [New Port...].

The [Select Printer] dialog box appears and printers.

The displayed items are as follows:

Model Name: The model name of the printer.

Printer Name: The name of the printer.

Comment: Additional information about the printer.

Address: The IP address of the printer.

- 5** Select the machine.

TCP/IP

- 1** Click [TCP/IP], and then click [search].

A list of printers that can be printed to by the TCP/IP protocol appears.

- 2** Click the machine you want to use, and then click [OK].

Note

- Printers that respond to an IP broadcast from the computer will be displayed. To print to a printer not listed here, click [Specify Address], and then type the IP address or host name.

NetBEUI

- 1 Click **[NetBEUI]**, and then click **[search]**.

A list of printers that can be printed by the NetBEUI protocol appears.

- 2 Click the machine you want to use, and then click **[OK]**.

Note

- Printers that respond to a broadcast from the computer will be displayed. To print to a printer not listed here, click **[Specify Address]**, and then type the NetBEUI address. Make sure that the NetBEUI address is on the system configuration list. For information about the printing of the system configuration list, see Printer Reference 2.
- You cannot print to printers beyond routers.

IPP

- 1 Click **[IPP]**.

The IPP setting dialog box appears.

- 2 To specify the IP address of the machine, type "http://machine's-ip-address/printer" or "ipp://machine's-ip-address/printer" in the **[Printer URL]** field.

(192.168.15.16 is an example IP address.)

`http://192.168.15.16/printer`

`ipp://192.168.15.16/printer`

- 3 If necessary, type a name to distinguish printers in **[IPP Port Name]**. Type a name different from any existing port names.

If you omit this, the address entered in **[Printer URL]** will be set as the IPP port name.

- 4 If using a proxy server and IPP user name, click **[Detailed Settings]** and configure the necessary settings.

Reference

For more information about these settings, see SmartNetMonitor for Client Help.

- 5 Click **[OK]**.

- 6 Click **[OK]**.

- 7 Click **[Close]**.

- 8 Make sure that the specified printing port is displayed in the **[Print to the following Port(s)]** box, and then click **[OK]**.

This completes the settings.

To print, select the printer specified. SmartNetMonitor for Client will now direct print data to the printer automatically.

Changing Port Settings

Follow these steps to change SmartNetMonitor for Client settings, such as TCP/IP, the proxy server and IPP URL.

Note

There are no settings for the NetBEUI protocol.

1 From the [Printers] window, click the icon of the machine you want to use. On the [File] menu, click [Properties].

2 Click the [Ports] tab, and then click [Configure Port].

The [Port Configuration] dialog box appears.

- For TCP/IP protocol, you can configure Timeout Settings.
- For IPP, you can configure User Settings or Proxy Settings.

Reference

For more information about these settings, see SmartNetMonitor for Client Help.

Configuring LPR Port Printing

This section explains the procedure for printing to a LPR port from Windows NT.

Note

- The following procedure assumes that the printer drivers have already been installed. This is the procedure to change the printer port to LPR.
- The TCP/IP protocols must be installed and configured correctly. For more information about configuring the protocols, see p.43 “Configuring TCP/IP and IPP for Printing”.

1 Click **[Start]**, point to **[Settings]**, and then click **[Printers]**.

2 Click the icon of the machine you want to use. On the **[File]** menu, click **[Properties]**.

3 Click the **[Ports]** tab, and then click **[Add Port]**.

4 In the **[Available Printer Ports:]** box, click “LPR Port”, and then click **[New Port]**.

Note

- If “LPR Port” does not appear, “Microsoft TCP/IP Printing” has not been installed.

5 Type the IP address of the Network Interface Board into the **[Name or address of server providing lpd:]** box.

6 Type “lp” into the **[Name of printer or print queue on that server:]** box, and click **[OK]**.

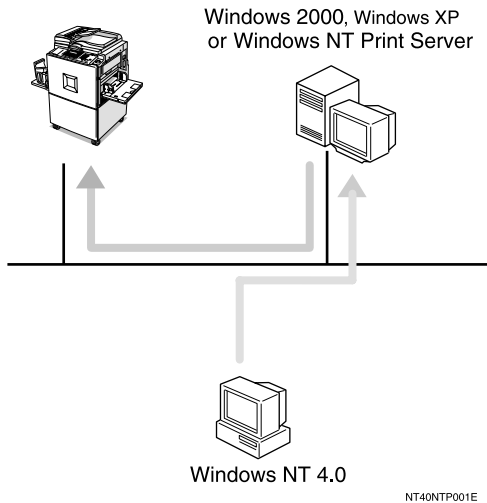
7 Click **[Close]**.

8 Make sure that the port name is displayed in the **[Print to the following port(s)]** box and the check box is selected, and then click **[OK]**.

Setting Up a Client Computer

This section describes the procedures for setting up a client on a network that uses Windows 2000/Windows XP, Windows NT Server or Windows NT Workstation as a print server.

When using a Windows 2000/Windows XP or Windows NT print server, select a shared printer on Windows 2000 or Windows NT.



Note

- ❑ This section assumes that the client has already been configured to communicate with a Windows 2000 or Windows NT print server. Do not begin the following procedure until the client has been set up and configured correctly.

Use the **[Printers]** window to set up the machine.

1 Click **[Start]**, point to **[Settings]**, and then click **[Printers]**.

2 Double-click the **[Add Printer]** icon.

This launches the Add Printer Wizard.

3 Click **[Network printer server]** and click **[Next >]**.

4 In the **[Shared Printers:]** box, double-click the name of the computer used as a print server.

The printers attached to the network are displayed.

5 Click the machine you want to use and click **[OK]**.

Note

- ❑ If the printer driver is not installed in the print server, a message appears. If a driver has been installed on the client, click **[OK]**, and follow the instructions on the screen.
- ❑ There is a Windows NT printer driver on the CD-ROM labeled "Printer Drivers and Utilities".

6 Select whether to use this machine as the default printer, and click [Next >].

7 After the installation is complete, click [Finish].

The icon of the newly installed printer appears in the [Printers] window.

5. NetWare Configuration

This chapter describes how to configure the machine to use as a print server or a remote printer in a NetWare environment.

Note

- ❑ The NetWare settings are performed in Web Status Monitor or SmartNet-Monitor for Admin. See the corresponding online Help for details.

Installing the NIB Setup Tool

A utility called the NIB Setup Tool is provided to configure the machine to work in a network environment. This section describes how to install the SmartNet-Monitor for Admin, and how to run the NIB Setup Tool.

Limitation

- ❑ The NIB Setup Tool is supported to work with the following operating systems.
 - Microsoft Windows 95/98/Me
 - Microsoft Windows 2000/Microsoft Windows XP
 - Microsoft Windows NT 4.0

Installing SmartNetMonitor for Admin

Follow these steps to install the SmartNetMonitor for Admin.

Preparation

You should install the SmartNetMonitor for Admin on the computer. If you install the SmartNetMonitor for Admin from a file server or run it via the network, the SmartNetMonitor for Admin might not work correctly.

Make sure to close all applications before starting the installation procedure.

- 1** Close all the applications that are currently running.
- 2** Insert the CD-ROM labeled “Printer Drivers and Utilities” into the CD-ROM drive.
- 3** Open [Control Panel], and double-click the [Add/Remove Programs] icon.
- 4** On the [Install/Uninstall] tab, click [Install].
- 5** Click [Next >].

6 In the [Command line for installation program] box, type the name of the CD-ROM drive followed by “:\NETWORK\NETMON\ADMIN\DISK1\SETUP.EXE” (do not include the quotation marks), and then click [Finish].

 **Note**

- An example would be “D:\NETWORK\NETMON\ADMIN\DISK1\SETUP.EXE” when the CD-ROM drive name is “D”.

7 From the [Choose Setup Language] list, select the language you want to use, and then click [OK].

8 After the [Welcome] dialog box appears, click [Next >].

Follow the instructions on the screen.

Running the NIB Setup Tool

1 Click [Start], point to [Programs], and then click [NIB Setup Tool] in the [Smart-NetMonitor for Admin] program folder.

Quick Setup Using the NIB Setup Tool Wizard

With the NIB Setup Tool, you can easily set up a NetWare printing environment.

Reference

For more information about installing the NIB Setup Tool, see p.55 “Installing the NIB Setup Tool”.

You can select **[Wizard]** or **[Property Sheet]** as an installation method.

When you configure the Network Interface Board for the first time, use the Wizard method.

If you want to use the Property Sheet method, see p.60 “NetWare 3.x - Advanced Settings” or p.66 “NetWare 4.x, 5/5.1 - Advanced Settings”.

Note

- This section assumes that NetWare is functional and that the necessary environment for NetWare Print Services is available.
- If you configure the Network Interface Board in a NetWare environment using the NIB Setup Tool, you should install the client software released from Novell in the following cases.
 - Windows 95/98/Me in NDS mode configuration
 - Windows NT 4.0 in NDS mode configuration
 - Windows NT 4.0 in Bindery mode configuration
 - Windows 2000 in NDS mode configuration
 - Windows 2000 in Bindery mode configuration
 - Windows XP in NDS mode configuration
 - Windows XP in Bindery mode configuration

1 Log on to the Netware file server or the NDS tree as an Admin or Admin equivalent.

2 Run the NIB Setup Tool.

Reference

⇒ p.56 “Running the NIB Setup Tool”

3 Click **[Wizard]** and click **[OK]**.

The **[NIB Setup Tool - Network board list]** dialog box of the Network Interface Board appears.

4 Click **[IPX protocol]**.

- 5** Click to select the IPX address of the Network Interface Board you are configuring, and then click **[Next >]**.

 **Note**

- If you do not know which Network Interface Board you are configuring, print a system configuration list to check the MAC address (Network address).

- 6** Make sure that the MAC address and IPX address are correct, and click **[Finish]**.

- 7** Type the print server name into the **[Device Name]** box, and click **[Next >]**.

The default setting is "RDP_" followed by the 6 digit serial number. We recommend that you change it to something that is easier to remember or something based on the structure of the network.

- 8** In a dialog box for selecting a network environment, click to select the **[NetWare]** check box and click to clear the **[TCP/IP]** check box.

- 9** Click **[Next >]**.

A dialog box for configuring the NetWare environment appears.

- 10** Select **[Bindery]** when printing under Bindery mode, or select **[NDS]** when printing under NDS mode.

When you are using NetWare version 4.x, you should select **[NDS]**.

- 11** If you selected **[Bindery]**, type into the **[File Server Name:]** box the name of the file server in which a print server is to be created.

After clicking **[Browse]**, you can select a file server among those listed in the **[Browse]** dialog box.

- 12** If you selected **[NDS]**, type into the **[Tree:]** box the name of the NDS tree in which the print server is created, and type the context into the **[Context:]** box.

Clicking **[Browse]**, you can select an NDS tree and an NDS context among those listed in the **[Browse]** dialog boxes.

As a context, object names are typed from a lower object and divided by a period. For example, if you want to create a print server into NET under DS, type "NET.DS".



- 13** Click **[Next >]**.

- 14** Type the name of the machine into the **[Printer Name]** box, and the name of the print queue into the **[Print Queue Name]** box.

The default setting for Printer Name is "Print Server Name" followed by "_1" and for Print Queue Name is "Print Server Name" followed by "_Q" (quotation marks are not included). You can change them if necessary.

- 15** If you have selected the NDS mode, type the volume of the print queue into the **[Queue Volume]** box.

Clicking **[Browse]**, you can select one of those shown in the **[Browse]** dialog box.

- 16** Click **[Next >]**.

A dialog box to acknowledge the printing environment appears.

- 17** Check the environment, and then click **[Next >]**.

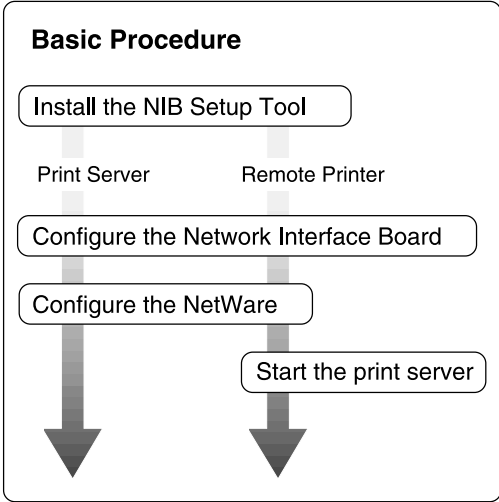
If you want to change the settings, click **[< Back]** and make the settings again.

Clicking **[Next >]**, the NIB Setup Tool automatically creates the Print Server, the Printer, and the Print Queue in the NetWare network.

- 18** After the confirmation dialog box appears, select **[Quit]** and click **[Finish]** to exit the NIB Setup Tool.

NetWare 3.x - Advanced Settings

The actual procedures for configuring the machine vary depending on whether the Network Interface Board is configured as a print server or as a remote printer. This section describes how to configure the machine in the NetWare 3.x environment.



5

Preparation

The following procedures use the Property Sheet method in configuring the Network Interface Board. If you configure the Network Interface Board as a NetWare print server for the first time, we recommend you use the Wizard method. ⇒ p.57 “Quick Setup Using the NIB Setup Tool Wizard”

Note

- ❑ This section assumes NetWare is functional and that the necessary environment for the NetWare Print Service is available.

Setting Up as a Print Server

1 Log on to the file server as a Supervisor or a Supervisor equivalent.

2 Run the NIB Setup Tool.

 **Reference**

⇒ p.56 "Running the NIB Setup Tool"

3 Click [Property Sheet] and click [OK].

The [NIB Setup Tool - Network board list] dialog box of the Network Interface Board appears.

4 Click [IPX protocol].

5 Click the IPX address of the Network Interface Board which is to be configured, and then click [Next >].

 **Note**

If you do not know which Network Interface Board you are configuring, see the system configuration list to check the MAC address (Network Address).

6 Make sure that the MAC address and IPX address are correct, and click [Finish].

The [NIB Setup Tool] window appears.

7 Click [Configure].

The property sheet appears.

8 Click the [General] tab, and type the name of the print server into the [Device Name] box.

9 Click the [NetWare] tab, and make the following settings.

1 Select [Bindery].

2 In the [File Server Name:] box, type the name of the file server in which a print server is to be created.

Click [Browse] to select a file server among those listed in the [Browse] dialog box.

3 Click [OK] to close the property sheet.

4 After the confirmation dialog box appears, click [OK].

10 On the [NIB] menu, click [Exit] to exit the NIB Setup Tool.

11 Type "PCONSOLE" from the command prompt.

F : > PCONSOLE

12 Create a print queue as follows: **Note**

If you use a currently defined print queue, go to step **13**.

- 1** From the [Available Options] menu, select [Print Queue Information] and press the [ENTER] key.
- 2** Press the [INSERT] key and type a print queue name.
- 3** Press the [ESC] key to return to the [Available Options] menu.

13 Create a printer as follows:

- 1** From the [Available Options] menu, select [Print Server Information] and press the [ENTER] key.
- 2** To create a new print server, press the [INSERT] key and type a print server name.

If you use a currently defined print server, select one of the print servers shown in the [Print Server] list.

 **Important**

Use the same name as that specified in the NIB Setup Tool. (Step **3**).

- 3** From the [Print Server Information] menu, select [Print Server Configuration].
- 4** From the [Print Server Configuration] menu, select [Printer Configuration].
- 5** Select the printer which is indicated as "Not Installed".
- 6** If you want to change the name of the printer, type a new name.

A name "Printer x" is assigned to the printer. "x" stands for the number of the selected printer.

- 7** For type, select [Remote Other/Unknown].

The IRQ, Buffer size, Starting form, and Queue service mode are automatically configured.

- 8** Press the [ESC] key, and click [Yes] in the confirmation dialog box.
- 9** Press the [ESC] key to return to the [Print Server Configuration] menu.

14 Assign print queues to the created printer as follows:

- 1** From the [Print Server Configuration] menu, select [Queues Serviced By Printer].
- 2** Select the printer created in step **13**.
- 3** Press the [INSERT] key to select a queue serviced by the printer.

 **Note**

You can select more than one queue at a time.

- 4** Follow the instructions on the screen to make other necessary settings.

When you have finished the previous steps, make sure that the queues are assigned.

- 15** Press the **[ESC]** key until “Exit?” appears, and select **[Yes]** to exit PCONSOLE.

 **Note**

- To make sure that the machine is correctly configured, type the following from the command prompt.

F : > USERLIST

- If the machine works as configured, the name of the print server appears as an attached user.

Setting Up as a Remote Printer

- 1** Log on to the file server as a Supervisor or a Supervisor equivalent.

- 2** Run the NIB Setup Tool.

 **Reference**

⇒ p.56 “Running the NIB Setup Tool”

- 3** Click **[Property Sheet]** and click **[OK]**.

The **[NIB Setup Tool - Network board list]** dialog box of the Network Interface Board appears.

- 4** Click **[IPX protocol]**.

- 5** Click the IPX address of the Network Interface Board to be configured, and click **[Next >]**.

 **Note**

- If you do not know which Network Interface Board you are configuring, see the system configuration list to check the MAC address (Network Address).

- 6** Make sure that the MAC address and IPX address are correct, and click **[Finish]**.

The **[NIB Setup Tool]** window appears.

- 7** Click **[Configure]**.

The property sheet appears.

- 8** Click the **[General]** tab, and type the name of the print server into the **[Device Name]** box.

- 9** Click the [NetWare] tab, and make the following settings.
- 1** In the [Print Server Name:] box, type the name of the print server.
 - 2** In the [File Server Name:] box, type the name of the file server in which a print server is to be created.
Click [Browse] to select a file server among those listed in the [Browse] dialog box.
 - 3** In the [Print Server Operation Mode] group, click [As Remote Printer].
 - 4** In the [Remote Printer No.] box, type the printer number.

Important

- Use the same printer number as that to be created in the print server.

- 5** Click [OK] to close the property sheet.
- 6** After the confirmation dialog box appears, click [OK].

- 10** On the [NIB] menu, click [Exit] to exit the NIB Setup Tool.

- 11** Type "PCONSOLE" from the command prompt.

```
F : > PCONSOLE
```

- 12** Create a print queue as follows:

Note

- If you use a currently defined print queue, go to step **13**.

- 1** From the [Available Options] menu, select [Print Queue Information] and press the [ENTER] key.
- 2** Press the [INSERT] key and type a print queue name.
- 3** Press the [ESC] key to return to the [Available Options] menu.

- 13** Create a printer as follows.

- 1** From the [Available Options] menu, select [Print Server Information] and press the [ENTER] key.
- 2** To create a new print server, press the [INSERT] key and type a print server name.

If you use a currently defined print server, select one of the print servers shown in the [Print Server] list.

Important

- Use the same name as that specified in the NIB Setup Tool. (Step **8**).

- 3** From the [Print Server Information] menu, select [Print Server Configuration].
- 4** From the [Print Server Configuration] menu, select [Printer Configuration].
- 5** Select the printer which is indicated as "Not Installed".

Important

- Use the same number as that specified as Remote Printer No. using the NIB Setup Tool. (Step **9-4**).

6 Type a new name, if you change the name of the printer, .

A name "Printer x" is assigned to the printer. x stands for the number of the selected printer.

7 Select **[Remote Parallel, LPT1,]** for type.

The IRQ, Buffer size, Starting form, and Queue service mode are automatically configured.

8 Press the **[ESC]** key, and click **[Yes]** in the confirmation dialog box.**9** Press the **[ESC]** key to return to **[Print Server Configuration Menu]**.**14** Assign print queues to the created printer as follows:**1** From **[Print Server Configuration Menu]**, select **[Queues Serviced By Printer]**.**2** Select the printer created in step **13**.**3** Press the **[INSERT]** key to select a queue serviced by the printer. **Note**

You can select more than one queue at a time.

4 Follow the instructions on the screen to make other necessary settings.

When you have finished the above steps, make sure that the queues are assigned.

15 Press the **[ESC]** key until "Exit?" appears, and select **[Yes]** to exit PCONSOLE.**16** Start the print server by typing the following from the console of the NetWare Server.

If it is running, restart it after exiting it.

❖ To exit

```
CAREE: unload pserver
```

❖ To start

```
CAREE: load pserver print_server_name
```

 **Note**

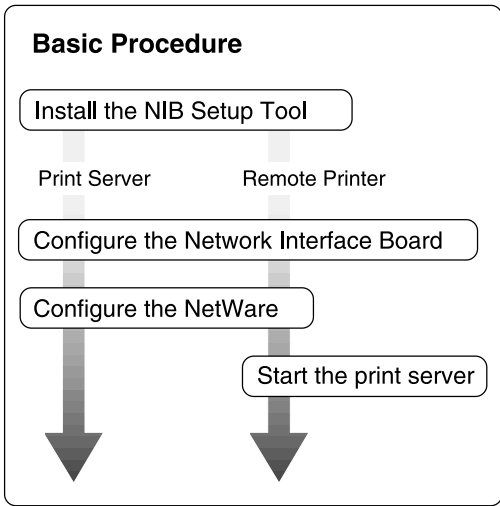
If the machine works as configured, "Waiting for job" appears.

NetWare 4.x, 5/5.1 - Advanced Settings

The actual procedures for configuring the machine vary depending on whether the Network Interface Board is configured as a print server or as a remote printer. This section describes how to configure it in the NetWare 4.x, 5/5.1 environment.

❖ To use NetWare 5/5.1

- If you use Pure IP, configure the machine to use the TCP/IP protocol. For more information about how to make the settings, see Printer Reference 1.



5

📄 Preparation

The following procedures use the Property Sheet method in configuring the Network Interface Board. If you configure the Network Interface Board as a NetWare print server for the first time, we recommend you use the Wizard method. ⇒ p.57 “Quick Setup Using the NIB Setup Tool Wizard”

📌 Note

- ❑ This section assumes NetWare is functional and that the necessary environment for the NetWare Print Service is available.
- ❑ You should install the client software released from Novell in Windows before running the NIB Setup Tool for configuring in NDS mode or using Windows NT 4.0.

Setting Up as a Print Server

Important

- You can set up the print server using the NDS or Bindery mode in NetWare 4.x, 5/5.1. The following procedure is for setting up the print server using the NDS mode in NetWare 4.1. When you set up the print server using the Bindery mode, use the NIB Setup Tool Wizard. ⇒ p.57 “Quick Setup Using the NIB Setup Tool Wizard”.

Note

- If you use Pure IP in NetWare 5/5.1, follow the procedure on p.70 “Using Pure IP in the NetWare 5/5.1 environment”.

1 Log on to the file server as an Admin or an Admin equivalent.

2 Run the NIB Setup Tool.

Reference

⇒ p.56 “Running the NIB Setup Tool”

3 Click [Property Sheet] and click [OK].

The [NIB Setup Tool - Network board list] dialog box of the Network Interface Board appears.

4 Click [IPX protocol].

5 Click the IPX address of the Network Interface Board which is to be configured, and then click [Next >].

Note

- If you do not know which Network Interface Board you are configuring, see the system configuration list to check the MAC address (Network Address).

6 Make sure that the MAC address and IPX address are correct, and click [Finish].

The [NIB Setup Tool] window appears.

7 Click [Configure].

The property sheet appears.

8 Click the [General] tab, and type the name of the print server into the [Device Name] box.

9 Click the [NetWare] tab, and make the following settings.

- 1** In the [Print Sever Name:] box, type the name of the print sever.
- 2** In the [File Sever Name:] box, type the name of the file sever in which a print server is to be created.

Click [Browse] to select a file server among those listed in the [Browse] dialog box.

- 3** In the [NDS Context:] box, type the context in which the print server is to be created.

Click [Browse] to select a context among those listed in the [Browse] dialog box.

As a context, object names are typed from a lower object and divided by a period. For example, if you want to create a print server into NET under DS, type "NET.DS".



- 4** Click [OK] to close the property sheet.
- 5** After the confirmation dialog box appears, click [OK].

10 On the [NIB] menu, click [Exit] to exit the NIB Setup Tool.

11 From Windows, run NWAdmin.

Reference

For more information about NWAdmin, see the documentation that comes with the NetWare.

12 Create a print queue as follows:

- 1** Select the container object the print queue is located in among those in the directory tree, and click [Create] on the [Object] menu.
- 2** In the [Class of new object] box, click "Print Queue", and click [OK].
- 3** In the [Print Queue name] box, type the name of the print queue.
- 4** In the [Print Queue volume] box, click the [Browse] button.
- 5** In the [Available objects] box, click the volume in which the print queue is created, and click [OK].
- 6** Check the settings, and then click [Create].

13 Create a printer as follows:

- ❶ Select the container object the printer is located in, and click **[Create]** on the **[Object]** menu.
- ❷ In the **[Class of new object]** box, click "Printer", and click **[OK]**. When you are using NetWare 5/5.1, click "Printer (Non NDPS)".
- ❸ In the **[Printer name]** box, type the name of the printer.
- ❹ Select the **[Define additional properties]** check box, and click **[Create]**.

14 Assign print queues to the created printer as follows:

- ❶ Click **[Assignments]**, and click **[Add]** in the **[Assignments]** group.
- ❷ In the **[Available objects]** box, click the queue created in step **13**, and click **[OK]**.
- ❸ Click **[Configuration]**, and in the **[Printer type]** box, select **[Parallel]** using the drop-down menu, and then click **[Communication]**.
- ❹ Click **[Manual load]** in the **[Communication type]** group, and click **[OK]**.
- ❺ Check the settings, and then click **[OK]**.

15 Create a print server as follows:

- ❶ Select the context specified using the NIB Setup Tool (step **9-1**), and on the **[Object]** menu, click **[Create]**.
- ❷ In the **[Class of new object]** box, click "Print Server", and click **[OK]**. When you are using NetWare 5/5.1, click "Print Server (Non NDPS)".
- ❸ In the **[Print Server name]** box, type the name of the print server.

Important

- Use the same name as that specified using the NIB Setup Tool. (Step **8**)

- ❹ Select the **[Define additional properties]** check box, and click **[Create]**.

16 Assign the printer to the created print server as follows:

- ❶ Click **[Assignments]**, and click **[Add]** in the **[Assignments]** group.
- ❷ In the **[Available objects]** box, click the printer created in step **13**, and click **[OK]**.
- ❸ Check the settings, and then click **[OK]**.

Note

- If the machine works as configured, the name of the print server appears as an attached user.

Using Pure IP in the NetWare 5/5.1 environment

1 Log on to the file server as an Admin or an Admin equivalent.

2 Run the NIB Setup Tool.

 **Reference**

⇒ p.56 “Running the NIB Setup Tool”

3 Click **[Property Sheet]** and click **[OK]**.

The **[Network board list]** dialog box appears.

4 Click **[TCP/IP protocol]**.

5 Click the IP address of the Network Interface Board which is to be configured, and then click **[Next >]**.

 **Note**

If you do not know which Network Interface Board you are configuring, see the system configuration list to check the MAC address (Network Address).

6 Make sure that the MAC address and IP address are correct, and click **[Finish]**.

The **[NIB Setup Tool]** window appears.

7 Click **[Configure]**.

The property sheet appears.

8 Click the **[General]** tab, and type the name of the print server into the **[Device Name:]** box.

9 Click the **[NetWare]** tab, and make the following settings.

1 In the **[Print Server Name:]** box, type the name of the print server.

2 In the **[File Server Name:]** box, type the name of the file server in which a print server is to be created.

Click **[Browse]** to select a file server among those listed in the **[Browse File Server]** dialog box.

3 In the **[NDS Context:]** box, type the context of the print server.

Click **[Browse]** to select an NDS tree and an NDS context among those listed in the **[Browse Context]** dialog box.

As a context, object names are typed from a lower object and divided by a period. For example, if you want to create a print server into NET under DS, type “NET.DS”.



- 4 In the [Print Server Operation Mode] group, click [As Print Server].
 - 5 Click [OK] to close the property sheet.
 - 6 After the confirmation dialog box appears, click [OK].
- 10 On the [NIB] menu, click [Exit] to exit the NIB Setup Tool.
After this step, go to step 11 on p.67 "Setting Up as a Print Server".

Setting Up as a Remote Printer

- 1 Log on to the file server as an Admin or an Admin equivalent.

- 2 Run the NIB Setup Tool.

 **Reference**

⇒ p.56 "Running the NIB Setup Tool"

- 3 Click [Property Sheet] and click [OK].

The [NIB Setup Tool - Network board list] dialog box of the Network Interface Board appears.

- 4 Click [IPX protocol].

- 5 Click the IPX address of the Network Interface Board to be configured, and click [Next >].

 **Note**

If you do not know which Network Interface Board you are configuring, see the system configuration list to check the MAC address (Network Address).

- 6 Make sure that the MAC address and IPX address are correct, and click [Finish].

The [NIB Setup Tool] window appears.

- 7 Click [Configure].

The property sheet appears.

- 8 Click the [General] tab, and type the name of the print server into the [Device Name] box.

- 9 Click the [NetWare] tab, and make the following settings.

- 1 In the [Print Server Name:] box, type the name of the print server.

- 2 In the [File Server Name:] box, type the name of the file server in which a print server is to be created.

Click [Browse] to select a file server among those listed in the [Browse] dialog box.

- 3 In the **[NDS Context:]** box, type the context in which the print server is to be created.

Click **[Browse]** to select a context among those listed in the **[Browse]** dialog box.

As a context, object names are typed from a lower level object and divided by a period. For example, if you want to create a print server into NET under DS, type "NET.DS".



- 4 In the **[Print Server Operation Mode]** group, click **[As Remote Printer]**.
- 5 In the **[Remote Printer No.]** box, type the printer number.

Important

- Use the same printer number as that of the printer to be created in the print server.

- 6 Click **[OK]** to close the property sheet.
- 7 After the confirmation dialog box appears, click **[OK]**.

- 10 On the **[NIB]** menu, click **[Exit]** to exit the NIB Setup Tool.

- 11 From Windows, run NWAdmin.

Reference

For more information about NWAdmin, see the documentation that comes with the NetWare.

- 12 Create a print queue as follows:

- 1 Select the container object the print queue is located in among those in the directory tree, and click **[Create]** on the **[Object]** menu.
- 2 In the **[Class of new object]** box, click "Print Queue", and click **[OK]**.
- 3 In the **[Print Queue name]** box, type the name of the print queue.
- 4 In the **[Print Queue Volume]** box, click **[Browse]** button.
- 5 In the **[Available objects]** box, click the volume in which the print queue is created, and click **[OK]**.
- 6 Check the settings, and then click **[Create]**.

- 13 Create a printer as follows:

- 1 Select the container object the printer is located in, and click **[Create]** in the **[Object]** menu.
- 2 In the **[Class of new object]** box, click "Printer", and click **[OK]**. When you are using NetWare 5/5.1, click "Printer (Non NDPS)".

- ③ In the [Printer name] box, type the name of the printer.
- ④ Select the [Define additional properties] check box, and click [Create].

14 Assign print queues to the created printer as follows:

- ① Click [Assignments], and click [Add] in the [Assignments] group.
- ② In the [Available objects] box, click the queue created in step 12, and click [OK].
- ③ Click [Configuration], and in the [Printer type] box, select [Parallel] using the drop-down menu, and then click [Communication].
- ④ Click [Manual load] in the [Communication type] group, and click [OK].
- ⑤ Check the settings, and then click [OK].

15 Create a print server as follows:

- ① Select the context specified using the NIB Setup Tool (Step 9-1), and on the [Object] menu, click [Create].
- ② In the [Class of new object] box, click "Print Server", and click [OK]. When you are using NetWare 5/5.1, click "Print Server (Non NDPS)".
- ③ In the [Print Server name] box, type the name of the print server.

Important

- Use the same name as that specified using the NIB Setup Tool. (Step 8).

- ④ Select the [Define additional properties] check box, and click [Create].

16 Assign the printer to the created print server as follows:

- ① Click [Assignments], and click [Add] in the [Assignments] group.
- ② In the [Available objects] box, click the queue created in the step 15, and click [OK].
- ③ In the [Printers] group, click the printer assigned in step 2, and click [Printer Number].
- ④ Type the printer number and click [OK].

Important

- Use the same number as that specified as Remote Printer No. using the NIB Setup Tool. (Step 9-5).

- ⑤ Check the settings, and then click [OK].

17 Start the print server by typing the following from the console of the NetWare Server.

If it is running, restart it after exiting it.

❖ To exit

```
CAREE: unload pserver
```

❖ To start

```
CAREE: load pserver print_server_name
```

Setting Up a Client Computer

This section describes how to set up a client computer when using a NetWare print server.

Note

- This section assumes that the client has NetWare client applications installed and is correctly configured to communicate with a NetWare print server. If not, install the necessary applications before starting the setting up procedure.

Windows 95/98/Me

Follow the procedure to set up a Windows 95/98/Me client.

Preparation

Log on to the NetWare file server before starting the following procedure.

1 Install the printer driver you want to use as “Local printer”.

Reference

For more information about installing the printer driver, see Printer Reference 1.

Note

- Any port can be selected during the installation, however, LPT1 is recommended.

2 Click [Start], point to [Settings], and then click [Printers].

3 In the [Printers] window, click the icon of the machine you want to use.

4 On the [File] menu, click [Properties].

5 Click the [Details] tab, and click [Add Port].

6 Click [Network] and click [Browse].

7 On the network tree, double-click the name of the file server.

The queues are displayed.

8 Click the queue you want to print, and click [OK].

9 Click [OK].

In the [Print to the following port:] box, a network path to the printer appears.

10 Click [OK] to close the Printer Properties, and again, open it.

- 11** Click the [Printer Settings] tab.
- 12** Select to clear the [Form feed] and [Enable banner] check boxes.

 **Note**

- You should not select these boxes because they should be specified using the printer driver. If they are selected, the printer might not print correctly.

When using the PostScript printer driver

Follow these steps to set up for the PostScript printer driver.

- 1** Click the [PostScript] tab.
- 2** Click [Advanced].
- 3** Click to clear the [Send CTRL+D before job] and [Send CTRL+D after job] check boxes.
- 13** Click [OK] to close the Printer Properties.

Windows 2000/Windows XP

Follow the procedure to set up a Windows 2000/Windows XP client.

 **Preparation**

Log on to the NetWare file server before starting the following procedure.

- 1** Double-click the [My Network Places] icon on the desktop and navigate to the queue you want to use, and then double-click it.
The printers dialog box appears.
- 2** Click [No].
- 3** Close all the applications that are currently running.
- 4** Insert the CD-ROM labeled "Printer Drivers and Utilities" into the CD-ROM drive.
- 5** Install the printer driver.

 **Reference**

For more information about installing the printer driver, see Printer Reference 1.

- 6** From the [Port] list, select the queue you selected in step **1**, and click [Next >].
- 7** Follow the instructions on the screen to complete the installation of the printer driver.

Windows NT 4.0

Follow the procedure to set up a Windows NT 4.0 client.

Preparation

Log on to the NetWare file server before starting the following procedure.

- 1** Double-click the **[Network Neighborhood]** icon on the desktop and navigate to the queue you want to use, and then double-click it.

The **[Printers]** dialog box appears.

- 2** Click **[No]**.
- 3** Close all the applications that are currently running.
- 4** Insert the CD-ROM labeled "Printer Drivers and Utilities" into the CD-ROM drive.
- 5** Install the printer driver.

Reference

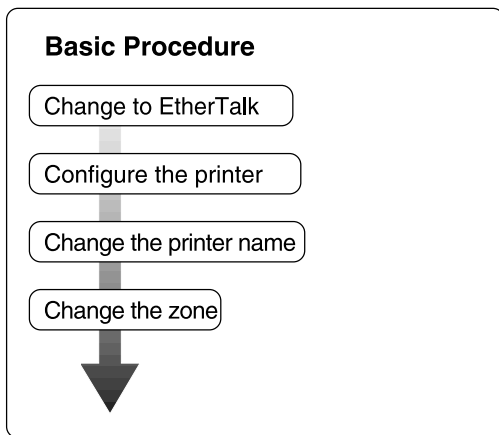
For more information about installing the printer driver, see Printer Reference 1.

- 6** From the **[Port]** list, select the queue you selected in step **1**, and click **[Next >]**.
- 7** Follow the instructions on the screen to complete the installation of the printer driver.

6. Macintosh Configuration

Configuring Macintosh

This section describes how to configure a Macintosh computer to use EtherTalk. The actual procedures to configure a Macintosh may vary depending on the version of Mac OS. The following procedure describes how to configure Mac OS 9.1 and Mac OS X version 10.1. If you are using other version of Mac OS and Mac OS X, see the manual that comes with your version of Mac OS and Mac OS X for more information.



MAC-G-010

! Limitation

- Use PostScript 3, to print from a Macintosh.

Changing to EtherTalk

The following procedure is for configuring a Macintosh computer to use EtherTalk.

Reference

For more information about installing the software required for EtherTalk, see the Macintosh manuals.

Mac OS

- 1** Open [Control Panels], and double-click the [AppleTalk] icon.
- 2** From the [Connect via:] pop-up menu, select "Ethernet".
- 3** If you change zones, select a name from the [Current zone:] pop-up menu.
- 4** Close the [AppleTalk] control panels.
- 5** Restart the Macintosh.

Mac OS X

Preparation

You need an administrator name and a password (phrase). For more information, consult your administrator.

- 1** Open [System Preference], and then click the [Network] icon.
- 2** Click the [AppleTalk] tab.
- 3** If you change zones, select a name from the [AppleTalk Zone:] pop-up menu.
- 4** When the setting is complete, click [Apply Now].

Configuring the Printer

Use the control panel to activate the EtherTalk protocol. (The default is active.)

Reference

For more information about configuration, see Printer Reference 1.

Changing the Printer Name

If the network has several same model printers, the names will be the same. Printers that have the same name will have their names changed slightly in the Chooser on Mac OS or Printer list on Mac OS X. For example, three printers named “printer” will appear in the chooser as “printer0”, “printer1” and “printer2”.

Use applications such as Apple Printer Utility or LaserWriter Utility to change printer names in the Macintosh EtherTalk environment. These utilities are distributed by Apple Computer, Inc.

Changing the Zone

It may be necessary to change the zone configuration.

Use applications such as Apple Printer Utility or LaserWriter Utility to change the zone configuration in the Macintosh EtherTalk environment. These utilities are distributed by Apple Computer, Inc.

Note

- ❑ If the Macintosh is configured to use TCP/IP, you can change the zone configuration with a Web Browser. ⇒ p.84 “Configuring the Network Interface Board with a Web Browser”

Follow these steps to use the Apple Printer Utility.

- ① Insert the CD-ROM into the CD-ROM drive.
- ② Copy the “Zone Name.ps” file in the “Zone Name” folder to the hard disk.
- ③ Open the copied “Zone Name.ps” file using a text editor, and change “New-Zone”, which is in the second line from the bottom, to the name of the new zone.


```

%!PS-Adobe2.0
%%Title: Changing Zone (EtherNet only)
%%CreationDate: Tue Dec 16 1997
%%EndComments
true 0 startjob not {ERROR} if
(%EtherTalk%) << /EtherTalkZone (NewZone) >> setdevparams
%%EOF
```
- ④ Save “Zone Name.ps”.
- ⑤ Run the Apple Printer Utility, and select the printer for which the new zone name is to be used.
- ⑥ Select [**Send PostScript File**] in the [**Utilities**] menu, and send “Zone Name.ps” to the printer.

Using SmartNetMonitor for Admin

Using SmartNetMonitor for Admin, you can not only monitor the status of network printers, but also change the configuration of the Network Interface Board using the TCP/IP protocol or IPX/SPX protocol.

SmartNetMonitor for Admin can do the following.

- Limit the settings available from the control panel, and disable changes made to some items.
- Enable selecting the paper type loaded in the printer.
- Check information about printing, paper exhaustion, and such on the computer.
- Monitor multiple printers at the same time. When there are many printers, you can create groups and classify the printers to facilitate management.
- Check the printer's network settings and detailed information of devices.
- Enable you to change the printer's network settings.
- Check the number of pages printed for each computer using the user codes.

OS	Protocol Stack
Microsoft Windows 95/98/Me	TCP/IP provided with Windows 95/98/Me IPX/SPX provided with Windows 95/98/Me NetWare network client provided with Windows 95/98 Novell Client for Windows 95/98
Microsoft Windows 2000	TCP/IP provided with Windows 2000 IPX/SPX provided with Windows 2000 NetWare Client provided with Windows 2000 Novell Client for Windows NT/2000
Microsoft Windows XP	TCP/IP provided with Windows XP IPX/SPX provided with Windows XP
Microsoft Windows NT 4.0	TCP/IP provided with Windows NT IPX/SPX provided with Windows NT Client Service for NetWare provided with Windows NT Novell Client for Windows NT/2000

Note

- Select the appropriate protocol stack for your operating system.

Changing the Network Interface Board Configuration

- 1 Run SmartNetMonitor for Admin.
- 2 Click the [Group] menu, point to [Open LAN], and then select [TCP/IP] or [IPX/SPX]. A list of printers appears.

 **Note**

- Select the protocol of the printer for which you want to change the configuration.

- 3 On the list, select a printer for which you want to change the configuration.

- 4 From the [Tools] menu, select [NIB Setup Tool].

The NIB Setup Tool starts up.

- 5 Select [Wizard] or [Property Sheet], and then click [Next].

- When configuring the Network Interface Board for the first time, select [Wizard].
- When changing the configuration of the Network Interface Board or configuring it in detail, select [Property Sheet].

7

Selecting [Wizard]

- 1 Fill in the necessary items, and then click [Next].
-

Selecting [Property Sheet]

- 1 A configuration list appears on the dialog box.

For more information about each item on the dialog box, see Help.

Managing the printed number of pages

1 Run SmartNetMonitor for Admin.

2 Click the [Group] menu, point to [Open LAN], and then select [TCP/IP] or [IPX/SPX].

A list of printers appears.

 **Note**

- Select the protocol of the printer for which you want to change the configuration.

3 On the list, select a printer whose statistics information you want to manage.

4 From the [Tools] menu, select [User Management Tool].

A dialog box prompting you to type a password appears.

5 Type the password, and then click [OK].

 **Note**

- The factory default password is "password".

The User Code Maintenance Tool starts up.

For more information about using the User Management Tool, see SmartNet-Monitor for Admin Help.

Configuring the Network Interface Board with a Web Browser

The Network Interface Board functions as a Web server in addition to allowing the machine to function as a network printer. You can use a Web Browser to view the printer status and configure the Network Interface Board.

❖ Configuring the machine

This requires the TCP/IP protocol to be installed. After the machine has been configured to use the TCP/IP protocol, it will be possible to adjust the settings using a Web Browser.

Reference

For more information about configuring the machine to use the TCP/IP protocol, see Printer Reference 2.

❖ Operating system browser requirements

OS	Browser
Windows 95/98/Me	Microsoft Internet Explorer 3.02/4.0 or later Netscape Navigator 3.0/4.0 or later
Windows 2000	
Windows XP	
Windows NT 4.0	
Mac OS 7.6.1 ~ 9.2	
Mac OS X	
Solaris 2.5 ~ 2.6	

Limitation

- Sometimes after clicking [**Back**], the previous page may not appear. In this case, click [**Refresh**] or [**Reload**].
- The text on the screen may disappear or be aligned incorrectly if the font size settings of the browser are too large. It is recommended that you use a font size equal to or smaller than “10 point” with Netscape Navigator, and “Medium” or smaller with Internet Explorer.

Going to the Top Page

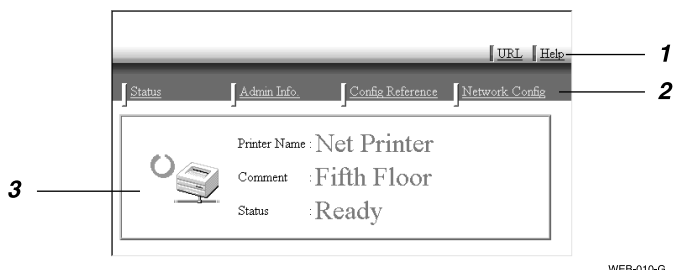
After launching the Web Browser, type the IP address of the machine. See the example below. This example is for the English version.

`http://192.168.15.16/`

(In this example, the IP address of the Network Interface Board is 192.168.15.16.)

Note

- ❑ If a DNS server is used on the network, you can type the host name as an URL. For example, `http://webmonitor.netprinter.com/`. In order to do this, you must register the IP address and host name of the Network Interface Board with the DNS server. Consult the network administrator for information about how to do this.
- ❑ If you want to use any equipment in the proxy server network environment, stop the proxy server or temporarily stop access to the proxy server from the equipment.



1. Header Buttons

You can register favorite URLs with **[URL]**. To view the Help section, click **[Help]**.

Important

- ❑ When connecting via a dial-up connection, please be aware that there will be a communication charge as you are logging onto the Internet.

Note

- ❑ Help is stored in the following folder on the CD-ROM in HTML format. The third folder, "(Language)" may be substituted by an appropriate language name.

`\HELP\WSMHLP\ (Language) \`

2. Menu Buttons

Buttons to configure the Network Interface Board and confirm the status of the machine.

Note

- ❑ When you click **[Network Config]**, a dialog box appears requesting the user name and the password. Type only the password in this dialog box. The factory default password is "password".
- ❑ The password is the same as that used for remote maintenance and that used in the NIB Setup Tool. If you change a password with the Web Browser, the other passwords are also changed.

3. Status

Displays the name and comments of the Network Interface Board, and the printer status.

Verifying the Network Interface Board Settings

- 1** Start the Web browser.
- 2** Point your browser at the URL or IP address of the printer (e.g. `http://XXX.XXX.XXX.XXX` where the Xs are the numbers of the IP address).
The status of the printer you chose appears on the Web browser.
- 3** Click **[Config. Reference]**.
The dialog box for entering the password and user name is displayed.
- 4** Click the item you want to check.
The following items can be checked:
 - ❖ **[General]**
Shows the general settings for the machine.
 - ❖ **[TCP/IP]**
Shows the TCP/IP-related settings for the Network Interface Board.
 - ❖ **[NetWare]**
Shows the settings for printing in a NetWare environment.
 - ❖ **[AppleTalk]**
Shows the Network Interface Board settings related to the AppleTalk protocol.
 - ❖ **[NetBEUI]**
Shows the Network Interface Board settings related to the NetBEUI protocol.

Linking the address (URL) to the [Help] button

You can link the address (URL) of the **[Help]** button to the Help files on the computer or on a Web server.

- ① Copy the Help files on the CD-ROM to the desired location. The Help files are located in folders labeled with abbreviated language names. For example, English Help files are in the **[EN]** folder. Be sure to copy the entire **[EN]** folder to the new location.
- ② Using a Web Browser, navigate to the Top Page and click **[Network config.]**.
- ③ Type your password, (it is not necessary to type a user name) and click **[OK]**.
- ④ Type the path to the Help files in the **[Help URL]** box.
If you copied the Help files to "C:\HELP\EN", type "file://C:/HELP/". For example if you copied the files to a web server and the index URL is "http://a.b.c.d/HELP/EN/index.html", type "http://a.b.c.d/HELP/".
- ⑤ Click **[Apply]**.
When a warning message appears, select to continue configuration.

Configuring the Network Interface Board Settings

- 1** Start the Web browser.
- 2** Point your browser at the URL or IP address of the printer (e.g. `http://XXX.XXX.XXX.XXX` where the Xs are the number of the IP address).
The status of the printer you chose appears on the Web browser.

- 3** Click **[Network Config]**.
The dialog box for entering the password and user name is displayed.

- 4** Enter your user name and password, and then click **[OK]**.
To use the factory default account, enter no user name and type "password" for the password.

- 5** Click the item you want to configure, and then make all the settings.
The following items can be configured:

- ❖ **[General]**
Configure the general settings for the machine here.
- ❖ **[TCP/IP]**
Configure the TCP/IP-related settings for the Network Interface Board.
- ❖ **[SNMP]**
Configure the appropriate community settings here. Up to 10 types of community names can be registered.
- ❖ **[NetWare]**
Configure the settings for printing in a NetWare environment here.
- ❖ **[AppleTalk]**
Configure the Network Interface Board settings related to the AppleTalk protocol.
- ❖ **[NetBEUI]**
Configure the Network Interface Board settings related to the NetBEUI protocol here.
- ❖ **[IPP Authentication]**
If using the IPP protocol, configure the authentication settings for printing here.
- ❖ **[Password]**
Enter the password to change the network and machine settings or delete spooled print jobs.

Monitoring and Configuring the Printer

Changing Names and Comments

You can change printer names and make comments for printers to easily identify the printers listed on SmartNetMonitor for Client.

The following utilities are used to change printer names and comments.

❖ SmartNetMonitor for Admin

Allows you to change names and comments when the TCP/IP protocol or IPX/SPX protocol is available. You can install SmartNetMonitor for Admin from the CD-ROM that comes with the printer. For more information about installing SmartNetMonitor for Admin, see the Setup Guide.

❖ Web Browser

Allows you to change names and comments when the TCP/IP protocol is available.

Note

- Each of the names, one for the TCP/IP protocol form (printer name) and NetBEUI protocol form, is changed individually. However comments are common to both of them.
- The factory default name consists of "RNP" and the last 3 bytes of the MAC address on the Network Interface Board. For example, when the MAC address is 00:00:74:62:7D:D5, the factory default name is "RNP627DD5". Comments are not configured.

SmartNetMonitor for Admin

1 Run SmartNetMonitor for Admin.

2 Click the [Group] menu, point to [Open LAN], and select [TCP/IP] or [IPX/SPX]. A list of printers appears.

Note

- Select the protocol of the printer for which you want to change the configuration.

3 On the list, select a printer whose Network Interface Board configuration you want to change.

4 From the [Tools] menu, select [NIB Setup Tool].

The NIB Setup Tool starts up.

- 5** Select **[Property Sheet]**, and then click **[OK]**.

TCP/IP

- 1** Click the **[General]** tab, and then type the device name into the **[Device Name]** box and a comment into the **[Comment]** box.
 - In the **[Device Name]** box, type the name of the printer using less than 13 characters. The factory default name consists of "RNP" and the last 3 bytes of the MAC address on the Network Interface Board. For example, when the MAC address is 00:00:74:62:7D:D5, the factory default name is "RNP627DD5". No name of 9 characters is permitted if the prefix is "RNP". Also, when DHCP is selected as an IP address setting, the number of characters is limited to 13 characters.
 - In the **[Comment]** box, type a comment about the printer using less than 31 characters.

NetBEUI

- 1** Click the **[General]** tab, and then type a comment into the **[Comment]** box.

In the **[Comment]** box, type a comment about the printer using less than 31 characters.
- 2** Click the **[NetBEUI]** tab.
- 3** Type the computer name into the **[Computer Name]** box.
 - In the **[Computer Name]** box, type a name that helps you to identify a printer using the NetBEUI protocol. The factory default name consists of "RNP" and the last 3 bytes of the MAC address on the Network Interface Board. For example, when the MAC address is 00:00:74:62:7D:D5, the factory default name is "RNP627DD5". A maximum of 13 characters consisting of uppercase English letters, numbers, or symbols (except "*+/,/;<=>?[\]|. and space) can be used. No name is permitted if the prefix is "RNP". You must avoid using a name already used.
 - In the **[Comment]** box, type a comment about the printer using less than 31 characters.

- 6** Click **[OK]**.

The NIB Setup Tool closes, and the settings are transmitted to the printer.

- 7** Exit **SmartNetMonitor for Admin**.

Web Browser

- 1 Run the Web browser.
- 2 Type the address "http:// (IP address of the printer for which you want to change the settings)".

The status of the selected printer is displayed on the Web browser.

- 3 Click [Configuration].

A dialog box that prompts you to type the user name and a password appears.

- 4 Type the user name and the password, and then click [OK].

Type only the password in this dialog box. The factory default password is "password".

- 5 Change names and comments.

TCP/IP

- 1 Click [General], and then type the name into the [Device Name:] box and a comment into the [Comment] box.

- In the [Device Name:] box, enter the name of the printer using less than 13 characters. The factory default name consists of "RNP" and the last 3 bytes of the MAC address on the Network Interface Board. For example, when the MAC address is 00:00:74:62:7D:D5, the factory default name is "RNP627DD5". No name of 9 characters is permitted if the prefix is "RNP". Also, when DHCP is selected as an IP address setting, the number of characters is limited to 13 characters.
- In the [Comment] box, type a comment about printer using less than 31 characters.

NetBEUI

- 1 Click [NetBEUI].
- 2 Type the name into the [Computer Name] box and a comment into the [Comment] box.

- In the [Computer Name] box, type a name that helps you to identify printers using the NetBEUI protocol. The factory default name consists of "RNP" and the last 3 bytes of the MAC address on the Network Interface Board. For example, when the MAC address is 00:00:74:62:7D:D5, the factory default name is "RNP627DD5". A maximum of 13 characters consisting of uppercase English letters, numbers, or symbols (except "*+,/;<=>?[\]|. and space) can be used. No name is permitted if the prefix is "RNP". You must avoid using a name already used.
- In the [Comment] box, type a comment about the printer using less than 31 characters.

6 Click **[Apply]**.

The settings are transmitted to the printer.

7 Exit the Web browser.

Displaying the Status of Printers

You can view the status of printers using SmartNetMonitor for Admin, SmartNetMonitor for Client, or Web browser.

SmartNetMonitor for Admin

1 Run SmartNetMonitor for Admin.**2** Click the **[Group]** menu, point to **[Open LAN]**, and then select **[TCP/IP]** or **[IPX/SPX]**.

The status of printers is indicated with an icon in the list.

 **Note**

- For more information about the status icons, see SmartNetMonitor for Admin Help.

3 For more information, click to select the desired printer from the list, and then click **[Open]** on the **[Device]** menu.

The status of the printer is displayed in the dialog box.

 **Note**

- For more information about each item in the dialog box, see Help.

SmartNetMonitor for Client

To view the status of a printer using SmartNetMonitor for Client, you must, in advance, configure SmartNetMonitor for Client so it monitors the printer whose status you want to view.

Monitoring Printers

1 Run SmartNetMonitor for Client.

The “Welcome to SmartNetMonitor for Client” screen appears.

 **Note**

- Click on **[Do not show this message again.]** to stop the message being displayed each time you launch SmartNetMonitor for Client.
- The remaining instructions in this manual assume that this screen is not displayed.

2 Click [OK].

The SmartNetMonitor for Client icon appears at the right end of the taskbar.

3 Right-click the SmartNetMonitor for Client icon, and check if the desired printer is configured on the pop-up menu that appears.

If it is configured, see SmartNetMonitor for Client Help.

4 If the desired printer is not configured, click [Options] on the pop-up menu.

The [SmartNetMonitor for Client - Options] dialog box appears.

5 Click the printer to be monitored, and select the [To Be Monitored] check box from the [Monitoring Information Settings] group. **Note**

- Selecting the [Displayed on Task Bar] check box will show the status of a printer with an icon on the SmartNetMonitor for Client icon on the task bar.

6 Click [OK].

The dialog box closes and the configured printer is monitored.

Displaying the Status of Printers

7**1** Run SmartNetMonitor for Client.**2** The status of printers is displayed on the SmartNetMonitor for Client icon on the task bar. **Note**

- For more information about the status icons, see SmartNetMonitor for Client Help.

3 For more information on the status, right-click the SmartNetMonitor for Client icon, and then click the desired printer.

The status of the printer is displayed in the dialog box.

 **Note**

- For more information about each item in the dialog box, see Help.

Web Browser

1 Run the Web browser.

2 Type the address "http:// (IP address of the printer whose status you want to view)".

The status of the selected printer is displayed in the Web browser.

3 Click [Status] and you can check the status of the printer.

 **Note**

For more information about each item, see Help.

Assigning IP Address with ARP+PING

Using TCP/IP, you can assign the IP address using ARP and PING. The following example is for a BSD UNIX workstation (SunOS 4.x).

Preparation

ARP+PING should be set to active on the network boot configuration before assigning the IP address using ARP+PING. For more information about setting it to active, see Printer Reference 1.

1 Log on to the workstation as root.

2 Use the `arp` command to assign the IP address to the MAC address of the Network Interface Board.

```
# arp -s 192.168.15.16 00:00:74:62:5C:65
```

Note

192.168.15.16 is the IP address, 00:00:74:62:5C:65 is the MAC address.

3 Assign the IP address using the `ping` command.

```
# ping 192.168.15.16
```

4 Use the `ping` command again to confirm the address.

```
# ping 192.168.15.16
```

If the address has been configured correctly, the following message appears.

```
192.168.15.16 is alive
```

If the address has been configured incorrectly, the following message appears.

```
no answer from 192.168.15.16
```

How to Confirm the MAC Address

The MAC address (Ethernet address) of the Network Interface Board is required in order to use ARP and PING to assign the IP address.

The MAC address can be seen on the system configuration list.

Reference

For how to print the system configuration list, see Printer Reference 2.

Note

The MAC address can also be seen on the system configuration list. For more information about the system configuration list, see p.123 “System Configuration List (Network Configuration)”.

Remote Maintenance by telnet (mshell)

You can view the machine status and configure the Network Interface Board using telnet.

Note

- You should specify a password so that only the network administrator, or a person having network administrator privileges, can use remote maintenance.

Using telnet

The following is a sample procedure in using telnet.

Limitation

- Only one person at a time can be logged on to do remote maintenance.

1 Using the IP address or host name of the machine, start telnet.

```
% telnet IP_address
```

Note

- In order to use the host name instead of the IP address, you must write it to the /etc/hosts file.

2 Type the password.

Note

- The factory default is "password".

3 Type a command.

Reference

For more information about telnet commands, see p.96 "Commands List".

4 Exit telnet.

```
msh> logout
```

When the configuration is changed, a confirmation message requests whether or not the changes should be saved.

5 Type "yes" to save the changes, and press the **[ENTER]** key.

If you do not want to save the changes, type "no" and press the **[ENTER]** key. If you want to make additional changes, type "return" at the command line, and press the **[ENTER]** key.

Note

- If the "Cannot write NVRAM information" message appears, the changes are not saved. Repeat the steps above.

- The Network Interface Board is reset automatically when the settings are changed.
- When the Network Interface Board is reset, the active print job which has already been sent to the machine will finish printing. However, jobs that have not been sent yet will be canceled.

Commands List

This is a list of commands that can be used via remote maintenance.

 **Note**

- Type “help” to see a list of commands that can be used.
`msh> help`
- Type “help *command_name*” to display information about the syntax of that command.
`msh> help command_name`

TCP/IP address

Use the `ifconfig` command to configure TCP/IP for the machine (IP address, subnet mask, broadcast address, default gateway address).

7

◆ **Reference**

```
msh> ifconfig
```

◆ **Configuration**

```
msh> ifconfig le0 parameter address
```

Parameter	Meaning
(no parameter)	IP address
netmask	subnet mask
gateway	default gateway address

The following is an example for configuring an IP address of 192.168.15.16.

```
msh> ifconfig le0 192.168.15.16
```

The following is an example for configuring a subnet mask of 255.255.255.0.

```
msh> ifconfig le0 netmask 255.255.255.0
```

 **Note**

- This affects the configuration of the Network Interface Board of the IP address that is used.
- To type an address using hexadecimal, prefix it by “0x”.

 **Address**
❖ Subnet Mask

A number used to mathematically “mask” or hide the IP address on the network by eliminating those parts of the address that are alike for all the machines on the network.

❖ Default Gateway Address

A gateway is a connection or interchange point that connects two networks. A gateway address is for the router or host computer used as a gateway.

 **Note**

- To get the above addresses, contact your network administrator.

Access Control

Use the access command to view and configure access control.

You can also configure multiple access controls with the multi command.

❖ Reference

```
msh> access
```

❖ Configuration

```
msh> access parameter address
```

Parameter	Meaning
control	Access Control Address
mask	Access Control Mask

 **Note**

- The Access Control Address and the Access Control Mask are used to limit access to the computer used for printing by denying access to users based on their IP address. If it is not necessary to limit access, set the Access Control Mask to “0.0.0.0”.
- When the Access Control Address matches the masked result of the IP address computer attempting to print, print jobs from that IP address will be accepted by the Network Interface Board.

- ❑ For example, if you assign 192.168.15.16 as the Access Control Address of the Network Interface Board, the IP addresses that can print are as follows. XXX means any number from 1 to 255 is acceptable.

Access Control Mask	IP addresses that can access the machine
0. 0. 0. 0	XXX.XXX.XXX.XXX
255. 0. 0. 0	192.XXX.XXX.XXX
255.255. 0. 0	192.168.XXX.XXX
255.255.255. 0	192.168. 15.XXX
255.255.255.255	192.168. 15. 16

❖ **Configuration for multiple access controls**

```
msh> access multi {on | off}
•“on” means active and “off” means inactive.
msh> access {1 - 5} parameter address
```

 **Note**

- ❑ Up to 5 access controls are available. Specify the number (1 - 5) when configuring some access controls. If this is not configured, the first setting is selected.

7

Network Boot

Use the set command to configure the boot method.

```
msh> set parameter {on | off}
•“on” means active and “off” means inactive.
```

Parameter	Meaning
ping	ARP+PING
tftp	RARP+TFTP
bootp	BOOTP
dhcp	DHCP (Dynamic Host Configuration Protocol)

 **Note**

- ❑ When you use RARP+TFTP, BOOTP or DHCP, the server also needs to be configured.
- ❑ DHCP takes precedence over all other settings.

Protocol

Use the set command to allow/prevent remote access for each protocol.

```
msh> set protocol {up | down}
```

Protocol	
appletalk tcpip netware netbeui lpr ftp rsh diprint npmp web snmp ipp	"up" means active and "down" means inactive.

Note

- If you prohibit remote access using TCP/IP and then log out, you cannot use remote access. If this was a mistake, you can use the machine's operation panel to allow access by TCP/IP.
- When you prevent access via TCP/IP, you are also prevented from using lpr, ftp, rsh, diprint, web, snmp, npmp, and ipp.

Machine status

The following commands can be used to get information about the current status of the machine.

```
msh> command
```

Command	Information that is displayed
info	Information about the paper tray, output tray and printer language of the machine.
netstat	Information about the Network Interface Board. (Network Statistical Information)

Note

- More information about any print job is displayed when the ID number is added after the prnlog command.

Reference

For more information about the meaning of the data returned with these commands, see p.108 "Configuring the Network Interface Board".

Network Interface Board configuration settings information

Use the show command to display the Network Interface Board configuration settings.

```
msh> show [-p]
```

Note

- Add “-p” to the show command to have the information displayed one screen at a time.

Reference

For more information about the meaning of the data returned with this command, see p.108 “Configuring the Network Interface Board”.

System log information

Use the syslog command to display information stored in the machine's system log.

```
msh> syslog
```

Reference

For more information about the displayed information, see p.111 “System Log Information”.

7

SNMP

Use the snmp command to display and edit SNMP configuration settings such as the community name.

Note

- You can configure from ten SNMP access settings numbered 1–10.
- Default access settings 1 and 2 are as follows.

Number	1	2
Community name	public	admin
IP address	0.0.0.0	0.0.0.0
Access type	read-only trap off	read-write trap off

❖ Display

Shows the SNMP information and available protocols.

```
msh> snmp ?
```

```
msh> snmp [-p] [registered_number]
```

Note

- If the -p option is added, you can view the settings one by one.
- Omitting the number displays all access settings.

❖ Community name configuration

You can set the community name of the Network Interface Board.

```
msh> snmp number name community_name
```

Note

- The community name must consist of 15 characters or less.

❖ Access type configuration

You can select the access type from those listed below.

```
msh> snmp number type access_type
```

Access type	Type of access which is permitted
read	Read only
write	Read and write
trap	User is notified of trap messages.
no	All access is denied.

❖ Protocol configuration

You should use the following command to set the protocols to active or inactive. If you set a protocol to inactive, all access settings set to use that protocol are disabled.

```
msh> snmp {ip | ipx} {on | off}
```

- “on” means active and “off” means inactive

To change the protocol of an access settings, use the following command. However, if you disabled a protocol with the above command, making it active here will have no effect.

```
msh> snmp number active {ip | ipx} {on | off}
```

❖ Access configuration

You can configure the address of a host depending on the protocols used. The Network Interface Board accepts requests only from hosts having addresses with access types of “read-only” or “read-write”. Type “0” to have the Network Interface Board accept requests from any host without requiring a specific type of access.

Command syntax:

```
msh> snmp number {ip | ipx} address
```

Note

- To specify the TCP/IP protocol, type ip followed by a space and then the IP address.
- To specify the IPX/SPX protocol, type ipx followed by a space and then the IPX address followed by a decimal and then the MAC address of the Network Interface Board.

The following is an example of how to configure registration number 3 with the IP address 192.168.15.16.

```
msh> snmp 3 ip 192.168.15.16
```

The following is an example of how to configure registration number 3 with the IPX address 7390A448, and the MAC address 00:00:74:62:5C:65.

```
msh> snmp 3 ipx 7390A448.000074625C65
```

IPP

Use the `ipp` command to configure the IPP settings.

❖ View settings

The following command displays the current IPP settings.

```
msh >ipp
```

Example output:

```
timeout=900(sec)
```

```
auth basic
```

- The "timeout" setting specifies how many seconds the computer keeps trying to access the network printer to send print jobs when no connection could be made.
- The "auth" setting indicates the user authorization mode.

❖ IPP timeout configuration

Specify how many seconds to wait before canceling a print job if it has been interrupted for some reason. The range of time can be changed between 30 to 65535 seconds.

```
msh>ipp timeout {30 -65535}
```

❖ IPP user authorization configuration

Use the IPP user authorization to restrict users that can print with IPP. The factory default is "off".

```
ipp auth {basic|digest|off}
```

- "basic" and "digest" are user authorization setting.
- "off" removes a user's authorization.

Note

- ❑ If you select "basic" or "digest", see next section "Configuring the IPP user authorization" for how to configure the user name. Up to ten user names are available.

❖ Configuring IPP user authorization

Use the following command:

```
ipp user
```

The following message appears.

```
Input user number (1 to 10):
```

Type the number, user name and password.

```
IPP user name:user1
```

```
IPP password:*****
```

After configuring the settings, the following message appears.

```
User configuration changed.
```

Changing the password

Use the passwd command to change the remote maintenance password.

⚠ Important

- Be sure not to forget or lose the password.

📝 Note

- The default factory password is “password”.

1 Type “passwd”.

```
msh> passwd
```

2 Type the current password.

```
Old password:
```

3 Type the new password.

```
New password:
```

📝 Note

- The password must consist of 3 to 8 alphanumeric characters and symbols. Upper and lower case characters are considered unique. For example, R is different from r.
- The password is the same as that used in the configuration of the Network Interface Board using a Web Browser and that used in the NIB Setup Tool. If you change a password from telnet, the other passwords are also changed.

4 Type the new password once again.

```
Retype new password:
```

Changing the NetBIOS name

Use the hostname command to change the NetBIOS name of the machine.

```
msh> hostname NetBIOS name of the machine
```

Note

- The NetBIOS name consists of up to 13 alphanumeric characters.
- You cannot use a name starting with “RNP” or “rnp”.

WINS

Use the wins command to configure the WINS server.

Reference

For how to configure the WINS server, see p.120 “Configuring a WINS Server”.

❖ WINS configuration

Use the set command to make WINS active or inactive.

```
msh> set wins {on|off}
```

- “on” means active and “off” means inactive.

❖ View settings

The following command displays the IP addresses of the WINS server.

```
msh> wins
```

Example output:

```
wins: primary server 192.168.10.1 secondary server
192.168.10.2
wins server current config: primary server 192.168.10.1
secondary server 192.168.10.2 hostname 123456789abcd ScopeID
```

Note

- The current configuration appears on the second line when DHCP is active. When DHCP is not active, there is no second line.
- If the network boot setting is changed to another from DHCP, the WINS server IP addresses that were saved on the machine may differ from the current IP addresses.

❖ Address configuration

Specify the WINS server IP addresses.

```
msh> wins {primary|secondary} IP_address
```

Use “primary” to specify the primary WINS server IP address, and use “secondary” to specify the secondary WINS server IP address.

AutoNet

Use the set command to configure AutoNet.

Reference

For more information about AutoNet, see p.122 “Using AutoNet”.

```
msh> set autonet {on|off}
```

- “on” means active and “off” means inactive.

Changing the password

Use the passwd command to change the remote maintenance password.

Important

- Be sure not to forget or lose the password.

Note

- The default factory password is “password”.

1 Type “passwd”.

```
msh> passwd
```

2 Type the current password.

```
Old password:
```

3 Type the new password.

```
New password:
```

Note

- The password must consist of 3 to 8 alphanumeric characters and symbols. Upper and lower case characters are considered unique. For example, R is different from r.
- The password is the same as that used in the configuration of the Network Interface Board using a Web Browser and that used in the NIB Setup Tool. If you change a password from telnet, the other passwords are also changed.

4 Type the new password once again.

```
Retype new password:
```

SNMP

The Network Interface Board functions as a SNMP (Simple Network Management Protocol) agent using the UDP and IPX protocols. Using the SNMP manager you can get information about the machine.

The factory default community names are “public” and “admin”. You can get MIB information using these community names.

Reference

For more information about configuring the community name, see p.100 “SNMP” in “Remote Maintenance by telnet”.

Limitation

The kinds of supported MIBs differ depending on the printer.

Supported MIBs

- MIB-II
- PrinterMIB
- HostResourceMIB
- RicohPrivateMIB

Understanding the Displayed Information

This section describes how to read status information returned by the Network Interface Board.

Network Statistical Information

Use the following command to view Network Interface Board network statistics. Detailed information about the words used to describe the status of the Network Interface Board are described below.

- mshell : Use the info command. ⇒ p.99 "Machine status"

Item name	Meaning
System elapsed time	The time that has passed since the Network Interface Board started.
Total printing time	The total time spent in processing the print data.
Total open count	The total open (printing process) count that the application required.
Current connection count	The current number of open connections with the Network Interface Board.
Total connection count	The total number of print jobs sent to the Network Interface Board.
Print error count	The number of times the printing process sent an error message.
Access error count	The number of times the connection was refused because of the access control value.
Print request full count	The number of times a connection was refused because the number of print requests exceeded the number of allowed sessions.

Item name	Meaning
TCP/IP Mode ftp lpr rsh diprint web telnet download nmp snmp ipp wins	Up means active, Down means inactive.
EncapType	Frame type.
Network boot	Network boot.
Filter	Internal parameter.
Max DSTs	Internal Information
Address	IP address.
Netmask	Subnet mask.
Broadcast	Broadcast address.
Gateway	Default gateway address.
AccessCtrl	Access control address.
AccessMask	Access control mask.
Primary WINS	Primary WINS server address
Secondary WINS	Secondary WINS server address
Time server	
Home page URL	URL of homepage.
Home page link name	URL name of homepage.
Help page URL	URL of help page.
SNMP protocol	Protocol used with SNMP.

Item name	Meaning
NetWare Mode EncapType RPRINTER number RPRINTER name Print server name Fileservername Context name Switch Mode NDS/Bindery Packet negotiation Print job timeout	(this value is fixed) Frame type. Remote printer number. Remote printer name. Print server name. Name of the connect file server. Context of print server. Active mode. (this value is fixed) Time of the job timeout.
NetBEUI Mode Switch Mode diprint Notification Workgroup name Computer name Comment Share name[1]	(this value is fixed) (this value is fixed) (this value is fixed) Notification of print job completion. Name of the workgroup. Name of the computer. Comment. Share name (name of the printer type).
Shell mode	Mode of the remote maintenance tool.

Message List

This is a list of messages written to the machine's system log. The system log can be viewed using the syslog command.

System Log Information

You can use the following methods to view the system log.

- mshell : Use the syslog command. ⇒ p.100 "System log information"

Message when the Network Interface Board starts or restarts

Network Interface Board Ver.x.x.x	The version number of the Network Interface Board.
PRINTER SYSTEM "system name" Ver.x.x.x	The system name and version of the machine.
Attach FileServer="file server name"	The machine is attached to "file server name" as the nearest server.
Current Interface Speed:xxxMbps	The speed of the network (10 Mbps or 100 Mbps).
Current IPX address	The current IPX address.
Frametype="frame type name"	The "frame type name" is configured to be used on NetWare.
NetBEUI Computer Name="computer name"	The NetBEUI Computer Name is defined as "computer name".
Start httpd	The Web server has been started.
Start npmpd for IPX	The npmpd for IPX protocol has been started.
Start npmpd for TCP/IP	The npmpd for TCP/IP protocol has been started.
Start smbd direct print mode(NetBEUI)	You can print from a client on the Windows network via the print server.
Start snmpd Ver.2.0	The SNMP agent of the displayed version has been started.
Vendor= , Country= , Lang=	The vendor, the country code, and the language.

NetWare (When the Network Interface Board is started)

◆ When working as a print server

Access to NetWare server "file server name" denied. Either there is no account for this print server on the NetWare server or the password was incorrect.	Cannot log in to the file server. Confirm that the print server is registered on the file server. If a password is specified for the print server, delete it.
Attach to print queue "print queue name"	Attached to the print queue.
Login to fileserv "file server name" ("NDS BINDERY")	Logged in to the file server with NDS or BINDERY mode.
Open log file "file name"	The specified log file has been opened.
Printer "printer name" has no queue	The print queue is not assigned to the machine. Using NWAdmin, assign the print queue to the machine, and then restart it.
Print queue "print queue name" cannot be serviced by printer 0, "print server name"	Print services are not available for the print queue. Confirm that the volume of the print queue exists on the specified file server.
The print server received error "error number" during attempt to log in to the network. Access to the network was denied. Verify that the print server name and password are correct.	Cannot log in to the file server. The print server is not registered or the password is specified. Register the print server without specifying a password.

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◆ When working as a remote printer

Cannot create service connection	Cannot establish a connection with the file server. Your request may exceed the maximum number of connections that the file server can deal with at a time.
Cannot find the printer ("print server name"/"printer number")	The printer having the number displayed on the print server does not exist. Confirm the number of the machine registered to the print server.
Establish a connection with the print server, "print server name"	A connection with the print server has been established.
No local target for "print server name"	Cannot get routing information about the file server. If a different frame type is configured from that used on the network, you should select "Auto Select" as a frame type.
Required file server ("file server name") not found	Cannot find the required file server.
Could not to attach to print server ("print server name")	Cannot connect to the print server. The print server refuses a connection for some reason. Confirm the configuration of the print server.

NetBEUI (When the Network Interface Board is started)

Back to default name (<Computer name>)	The same computer name is detected on the network. As unable to add computer name to the suffix, the computer name back to default name. Configure a new computer name that is unique.
Print session full	Cannot accept the print session.
Required computer name (<Computer name>) is duplicated name	The same computer name is detected on the network. The start job determines the computer name by adding the computer name to the suffix (0,1,...). Configure a new computer name that is unique.

TCP/IP

❖ When the address is configured

Invalid gateway address	The gateway address is not correct for the specified IP address.
-------------------------	--

❖ When using lpr

filter data error	Some data cannot be handled by the filter option. Confirm the file code and the settings of the filter option.
lost connection	The connection was cut by the other party. Check the machine to which you requested to print.
print requests full	Cannot accept the print request (max. 5 sessions). Confirm the status of the machine with lpq, rsh, rcp or ftp, and print it again after the print request becomes less than 5 sessions. However, the maximum request when using ftp command is 3.
printer permission denied	Cannot get permission to use the machine. Confirm the access rights with the access control address and the access control mask.
printer refuse	Something is wrong with the machine. Confirm the status of the machine.

At the beginning of the message, the IP address of the client is displayed with-in parentheses.

◆ When using rsh, rcp, ftp

Can't build data connection: "message"	Cannot establish a connection for data transfer due to the displayed error. Check the ftp of the workstation that requested the print job, and start it again. When using ftp, this message remains only on the system log information.
cmd_name:Command not supported	The remote shell command using cmd_name is not supported. You should use only the print, stat, syslog and info, commands. You should access the machine only with rsh and rcp remote shell commands.
command line too long	The command line is too long.
file_name:No such file or directory	You must use a file name with the stat, syslog, info and install commands.
filter data error	Some of the data cannot be handled with the filter option. Confirm the file code and the settings of the filter option.
get log busy	Another machine is getting the log information. You should get it afterwards.
lost connection	The connection was cut by the other party. Check the ftp of the workstation that requested the print job, and start it again. When using ftp, this message remains only on the system log information.
no more ftp execute	More than three users at a time cannot log in using ftp. Since there are three other users that have already logged in, wait until the job is finished.
print requests full	Cannot accept the print request.(max. five sessions) Confirm the status of the machine with lpq, rsh, rcp, and ftp commands, and print it again after the number of print requests (sessions) becomes less than five. However, the maximum request when using ftp command is 3.
printer busy	Cannot get the machine information. Another user may be accessing it. Wait a few minutes before trying again.
printer permission denied	Cannot get a permission to use the machine. Confirm the access right with the access control address and the access control mask.
printer refuse	Something is wrong with the machine. Confirm the status of the machine.

At the beginning of the message, the IP address is displayed in parentheses.

❖ When using SNMP

Exit snmpd	The agent is complete. Reset the machine or turn the machine off and on.
recvfrom:packet discarded,length(Reception packet length)> (Packet size),from addr <Address of partner point>	The received packet was ignored since the length of the packet exceeds the limit. Confirm whether the administration station sent a packet is longer than 1025 bytes.
session <Community name appointed> not defined	The community name of the received packet is not defined. Confirm that the community name of the administration station is the same as that specified for the machine.
snmpin:Bad use of session <community Name> from <Address>	The community name of the received packet is not the same as that of the administration station. Confirm the community name specified to the machine.
snmpin:error in snmpdecipher,code (<Error number>)	An error occurred with the received packet. Check if the number of the objects sent from the administration station is more than 31 and if there are wrong MIB requests.
snmpin:error in snmpservsend,code (<Error number>)	Cannot send a response packet. Normally, this message is followed by the messages below *1 *2.
snmpin:pkt too large,code (<Error number>)*1	The response packet to the request is too big to send. Reduce the number of the objects per request.
snmpin:error in sending too large request back,code (<Error number>),giving up*2	The packet notifying the error is too big to send. Reduce the number of the objects per request.
snmpin:received bad version	The version of the received packet is invalid. Confirm that the version of the administration station is version-1(0).

Error numbers in the messages are codes for internal use.

❖ When using DHCP

Connected DHCP Server(<IP address assigned by the DHCP server>)	The IP address is assigned by the DHCP server.
Current IP address(<Current IP address>)	This IP address assigned by the DHCP server is used.
DHCP lease time is infinity	Lease time of the IP address assigned by the DHCP server is infinity.
Auto-configured IP address(<Current IP address>)	This IP address assigned by AutoNet is used.

❖ When using WINS

WINS Server=<IP address of the WINS server> NetBIOS Name=<NetBIOS name>	Registering the NetBIOS name of the machine with the WINS server is complete.
WINS server address 0.0.0.0	The WINS server IP addresses are not specified. Specify the IP addresses.
WINS name registration/refresh error code (Error number)	Cannot register or refresh the NetBIOS name of the machine with a WINS server. Check if the WINS server IP addresses are specified correctly. Confirm that WINS server is available. Configure a new NetBIOS name that is unique.
WINS name registration: Server No Response WINS name refresh: Server No Response	There is no reply on registration or refresh request from the WINS server. Check if the WINS server IP addresses are specified correctly. Confirm that WINS server is available.
WINS wrong scopeID	The wrong scope ID is used. Configure the correct scope ID.

The Error number is the number that is sent in response to the WINS server error code.

Precautions

Please pay attention to the following when using the Network Interface Board. When configuration is necessary, follow the appropriate procedures below.

Connecting a Dial Up Router to a Network

When the NetWare file server and the machine are on the opposite side of a router, packets are continuously sent back and forth, possibly causing communication charges to increase. Because the packet transmission is a specification of NetWare, you need to change the configuration of the router. If the network you are using does not allow you to configure the router, configure the machine.

Configuring the router

Filter the packets so that they do not pass over the dial up router.

 **Note**

- The MAC address of the machine doing the filtering is printed on the system configuration list. For more information about printing the system configuration list, see p.123 "System Configuration List (Network Configuration)".
- For more information about configuring the machine if the router cannot be configured, see the instructions below.

Configuring the machine with NetWare

- 1** Following the setup method in this manual, configure the file server.
- 2** Set the frame type for a NetWare environment.

 **Reference**

For more information about selecting a frame type, see Printer Reference 1.

Configuring the machine without NetWare

- 1** While not printing, the Network Interface Board sends packets on the network. Set the NetWare to inactive.

 **Reference**

For more information about selecting a protocol, see Printer Reference 1.

PostScript Printing from Windows

When printing PostScript from Windows, see Printer Reference 2 for how to configure the Network Interface Board and printer driver.

NetWare Printing

Form Feed

You should not configure the form feed on NetWare. The form feed is controlled by the printer driver on Windows. If the NetWare form feed is configured, the machine might not print properly. If you want to change the form feed setting, always configure it on Windows.

- With Windows 95/98/Me, clear the **[Form feed]** check box on the **[Printer Settings]** tab in the Printer Properties dialog box.
 - With Windows 2000, clear the **[Form feed]** check box on the **[Netware Settings]** tab in the Printer Properties dialog box.
 - With Windows NT 4.0, clear the **[Form feed]** check box on the **[Netware Settings]** tab in the Printer Properties dialog box.
-

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Banner Page

You should not configure a banner page on NetWare. If you want to change the banner page setting, always configure it on Windows.

- With Windows 95/98/Me, clear the **[Enable banner]** check box on the **[Printer Settings]** tab in the Printer Properties dialog box.
 - With Windows 2000, clear the **[Enable banner]** check box on the **[Netware Settings]** tab in the Printer Properties dialog box.
 - With Windows NT 4.0, clear the **[Enable banner]** check box on the **[Netware Settings]** tab in the Printer Properties dialog box.
-

Printing after resetting the machine

After resetting the remote printer, it will be cut off from the print server for about 30-40 seconds before connecting again. Due to the NetWare specification, print jobs may be accepted, but they will not be printed during this interval.

When using the machine as a remote printer, wait about 2 minutes after resetting the machine before attempting to print.

When Using DHCP

Note the following points when using DHCP (Dynamic Host Configuration Protocol).

Supported systems

Windows 2000 Server, Windows NT Server 4.0 and NetWare 5 can be configured as a DHCP server.

Configure the machine with a reserved IP address

To always assign the same IP address, configure a reserved IP address using the DHCP server.

Note

- When multiple DHCP servers are used, reserve the same address with each DHCP server. The Network Interface Board needs to receive information from the DHCP server that it contacts.

Follow these steps to configure the machine with a reserved IP address.

- 1** Start the DHCP manager.
- 2** Select the scope that will be used, and on the [Scope] menu, click [Reservation].
- 3** Type the IP address into [IP Address].
- 4** Type the MAC address of the Network Interface Board into [Unique Identifier].

Note

- Do not use hyphens to separate the numbers.
- If you do not know the MAC address, it can be found on the system configuration list. ⇒ p.123 “System Configuration List (Network Configuration)”

- 5** Type a name and comment into the [Client Name] box and the [Client Comment] box.

Note

- For more information about client names, see p.120 “Additional information”.

- 6** Click [Add].

An IP address is reserved.

- 7** Click [Close] to close the dialog box.

Additional information

- When you click **[Active Lease]** on the **[Scope]** menu of DHCP manager, a list of client leases appears. When the reserved IP address is not active, the name of the reservation is the name entered in the Client Name field of the Add Reserved Clients dialog box. When the reserved IP address becomes active, the client name changes to the printer name configured by the Network Interface Board. Only the first 13 letters of the printer name appear here. When you use the machine with SmartNetMonitor for Admin, use the host name of the machine as the **[Client Properties]** Client Properties dialog box.
- When the DHCP server does not assign an IP address, the Network Interface Board uses 11.22.33.44 as a temporary IP address. You can confirm the machine's IP address on the system configuration list.
- Because 11.22.33.44 is a special IP address, you cannot print using this address.
- When using the DHCP relay agent in a network environment that uses a dial up router to connect to the Network Interface Board, an increase in communication fees can occur.

Configuring a WINS Server

The machine can be configured to register its NetBIOS name with a WINS server when power is turned on. This enables the NetBIOS name of the machine to be specified from SmartNetMonitor for Admin even in a DHCP environment.

This section describes how to configure the WINS server.

Note

- WINS Server is supported with Windows NT 4.0 Server Service Pack 4 or later, and Windows 2000 Servers WINS Manager.
- For more information about settings of WINS Server, see Windows Help.
- If there is no reply from the WINS Server, the NetBIOS name will be registered by broadcast.
- The NetBIOS name consists of up to 13 alphanumeric characters.

Using a WWW browser

1 Start the Web browser.

2 Point your browser at the URL or IP address of the machine (e.g. "http://XXX.XXX.XXX" substituting the Xs with the IP address).

The status of the machine you chose appears on the Web browser.

3 Click **[Network Config.]**.

The dialog box for entering the password and user name is displayed.

4 Enter your user name and password, and then click [OK].

To use the factory default account, enter no user name and type "password" for the password.

5 Click [TCP/IP].**6** Set [WINS] to active and enter the IP address of the WINS server in [Primary WINS Server] and [Secondary WINS Server].**7** Click [Refresh].**8** Exit the Web browser.**9** Restart the machine.

Using telnet

1 Connect to the remote printer using telnet.**2** Use the set command to make WINS active.

```
msh> set wins on
```

3 Specify the IP addresses (primary and secondary) using the following commands.

```
msh> wins primary IPaddress
```

```
msh> wins secondary IPaddress
```

 **Note**

- To confirm the current configuration, use the show command.

4 Log off from telnet.**5** Restart the machine.

Using DHCP

You can use the machine under a DHCP environment. You can also register the printer NetBIOS name on a WINS server when it is running.

 **Note**

- Printers that register their NetBIOS name on a WINS server must be configured for the WINS server.
- Supported DHCP servers are Windows NT 4.0 Server Service Pack 4 or later, Windows 2000 Server and NetWare 5.
- If you do not use WINS server, reserve machine's IP address in DHCP server so that the same IP address is assigned every time.
- DHCP relay-agent is not supported. If you use DHCP relay-agent on a network via an ISDN line, it will result in expensive line charges. This is because your computer connects to the ISDN line whenever a packet is transferred from the machine.

Using AutoNet

If the machine's IP address is not assigned by a DHCP server automatically, a temporary IP address starting with 169.254 which is not used on the network can be selected automatically by the machine.

Note

- The IP address assigned by the DHCP server is given priority to that selected by AutoNet.
- You can confirm the current IP address on the system configuration list.
- When AutoNet is running, the NetBIOS name is not registered on the WINS server.

When Using the NIB Setup Tool

If the Network Interface Board cannot browse using the TCP/IP protocol, confirm that the TCP/IP environment is correctly configured in your computer.

When Using IPP with SmartNetMonitor for Client

When using IPP with SmartNetMonitor for Client, note the following:

- The network printer can only receive one print job from SmartNetMonitor for Client at a time. While the network printer is printing a job, another user cannot access the network printer until it completes the job. In this case, SmartNetMonitor for Client tries to access the network printer until the retry interval expires.
- If SmartNetMonitor for Client cannot access the network printer and times out, SmartNetMonitor for Client stops sending the print job. In this case, you should cancel the paused status from the print queue window. SmartNetMonitor for Client will resume access to the network printer. You can delete the print job from the print queue window, but canceling a print job that has been printed by the network printer might cause the next print job sent from another user to be incorrectly printed.
- If a print job that is sent from SmartNetMonitor for Client is interrupted and the network printer cancels the job because something went wrong, launch the print job again.
- Print jobs sent from another computer do not appear in the print queue window regardless of the protocol.
- If various users send print jobs using SmartNetMonitor for Client to network printers, the printing order might not be in the order in which the jobs were sent.
- An IP address cannot be used for the IPP port name because the IP address is used for the SmartNetMonitor for Client port name.

System Configuration List (Network Configuration)

You can confirm the network information on the system configuration list.

- 1** Confirm that the machine is online.
- 2** Print the system configuration list.

Reference

For more information about printing the system configuration list, see Printer Reference 2.

Reference		Network Setup	
Printer ID	0000000000	Firmware Version	FERRET00 5.0.4 (0007) 0.1,2H
Master making	44	IP Address	192.168.000.060
Firmware Version	1.0.3	Subnet Mask	000.000.000.000
PS	1.0.2 3010. 106	Gateway Address	000.000.000.000
Printer	C2405114A	Access Control	000.000.000.000
Memory		Access Mask	000.000.000.000
Total Memory	32768 KB	Network Boot	None
Total VM	4098 KB	ActiveProtocols	All Active
Free VM	3803 KB	Ethernet	Auto Select
Options		Mac Address	00-00-74-6A-D6-AA
Tray 1,2	Not Installed	Printer Name	
Sorter	Not Installed	RNP6AD6AA	
Drum(Color)	Not Installed	NetWare	
Drum(S)	Not Installed	Operation Mode	
Job Control		Print Server	
Paper Source		Print Server Name	RNP6AD6AA
Tray Priority	Paper Feed Tray	Frame Type	
Tray Paper Size		Auto Select	
Paper Feed Tray	A4(210x297)	File Server Name	
Print Quality		Not Defined	
Resolution		NDS Context Name	
PS	400 dpi	Not Defined	
System		NetBEUI	
Print PS Errors	Off	Workgroups Name	
I/O Timeout	30 seconds	WORKGROUP	
I/O Buffer	512 KB	Network Path Name	
		\\RNP6AD6AA\UC_50600	
		AppleTalk	
		Printer Name	
		UC-50 400	
		AppleTalk Type	
		LaserWriter	
		AppleTalk Zone	
		146-ETC	
		Language	
		English	
Error Log			
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configE

1. TCP/IP

IP Address
Subnet Mask
Gateway Address
Access Control
Access Mask
Network Boot
ActiveProtocols
Ethernet

2. MAC Address

3. Printer Name

4. NetWare

Operation Mode
Print Server Name
Frame Type
File Server Name
NDS Context Name

5. NetBEUI

Workgroups Name

Network Path Name

6. AppleTalk

Printer Name

AppleTalk Type

AppleTalk Zone

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